

Caught by the Tide.
(From the picture by J. C. Hook, R.A. By permission of the Corporation of London.)

THE ROYAL SCHOOL SERIES

33384

Allahabad.

Highroads of Geography

Illustrated by Masterpieces of the following artists:—

J. M. W. Turner, Vicat Cole, John Constable, B. W. Leader,

F. Goodall, Briton Rivière, Colin Hunter, Stanhope

Forbes, J. C. Hook, Yeend King, Thomas

Somerscales, Edwin Ellis, David

Murray, &c., &c.



Book I.—Sunshine and Shower

THOMAS NELSON AND SONS

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BOOK I.

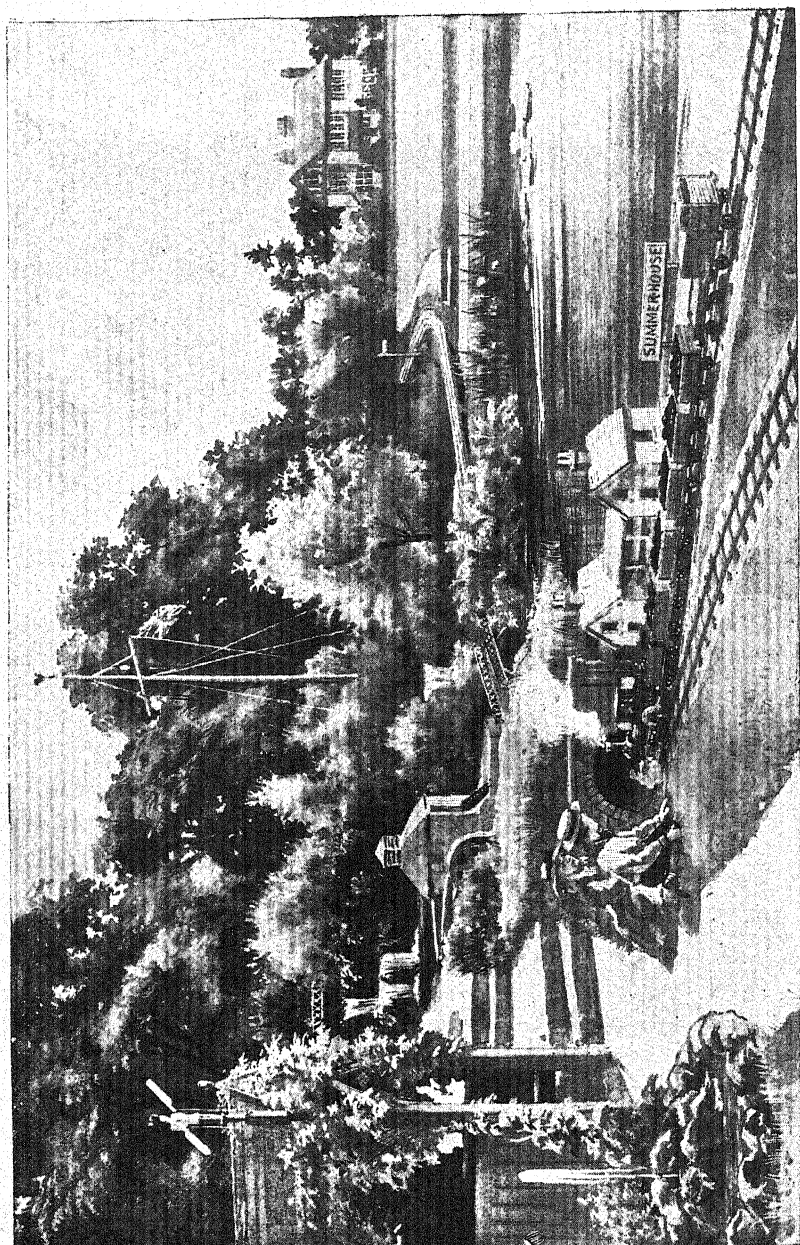
I. HOW WE MADE FRIENDS WITH MR. BLAKE.

1. My friend, Mr. Blake, is a dear old gentleman. He has been very kind to me. That is why I call him my friend.

2. He lives near our village, on the road to Barton. His house is not very large, but it is very pretty. It stands in a large garden with a thick hedge in front.

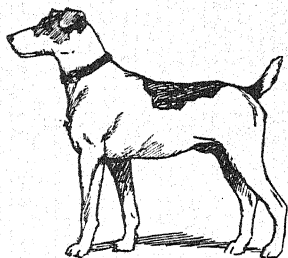
3. Until a month ago I had never been in Mr. Blake's garden. I wished to see it very much, because I had heard many stories about it. Father had seen it, and he said that it was splendid.

4. One afternoon my sister Kate and I set out for a walk. We took my dog Jim with us.



MR. BLAKE'S GARDEN.
(From the drawing by E. H. Fitchew.)

5. Just as we got to Mr. Blake's house a motor dashed by. At once Jim began to howl. The motor had run over his leg and had broken it. The poor dog was in great pain.



6. I tried to pick Jim up, but he snapped at me, and howled louder than ever. Just then I heard a stern voice say, "What are you doing to that dog?"

7. I turned round and saw Mr. Blake. "Please, sir," I said, "I am doing nothing. A motor has broken his leg."

8. Mr. Blake knelt down by the side of Jim and spoke to him very quietly. Then he picked him up. "Come with me," he said, "and I will set his leg. I am a doctor, you know."

9. He opened the gate, and we went with him into the house. He set the broken leg, and in a short time Jim stopped howling.

10. Mr. Blake put him on a mat in a

corner of the room. "Jim must stay here for a few days," he said. "Can you trust me to look after him?"

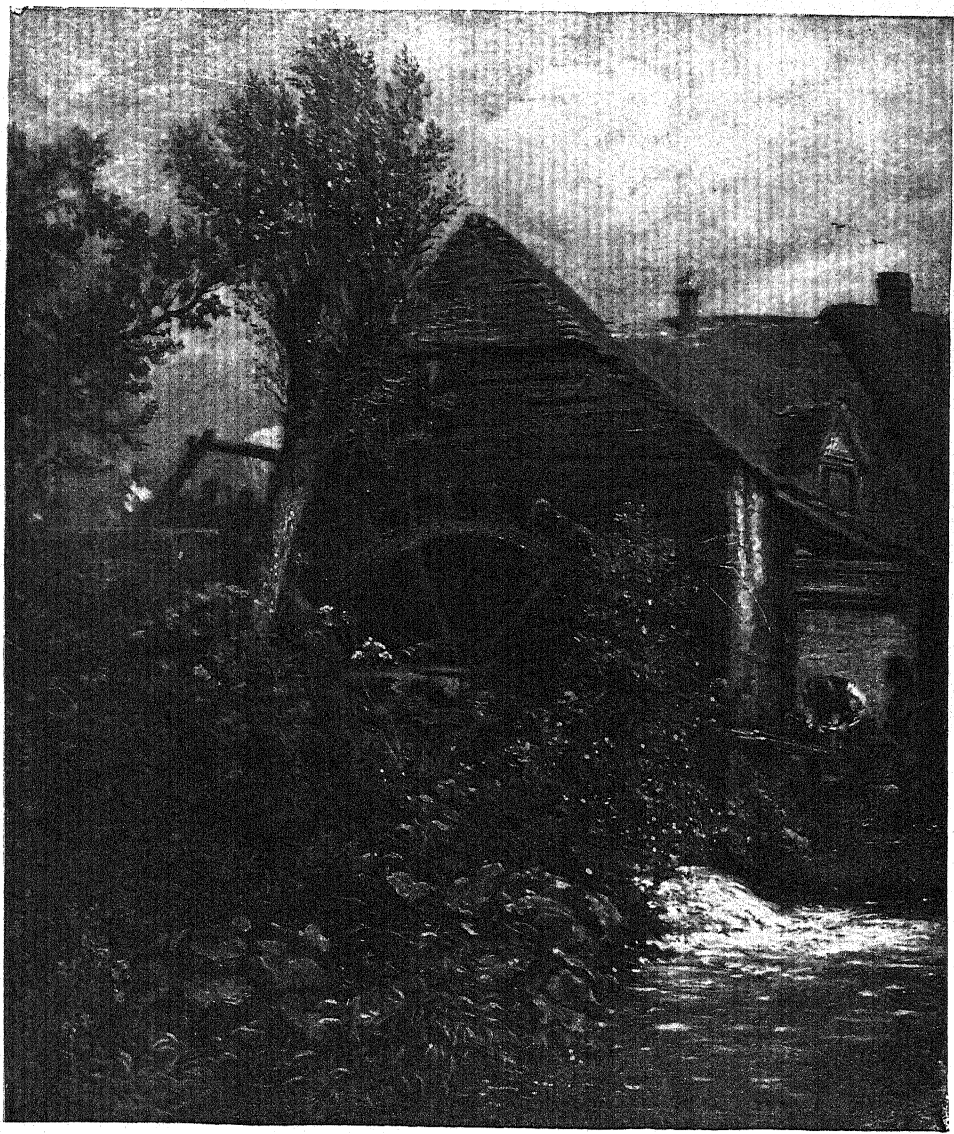
11. "Oh yes," we both cried. "Thank you so much." Mr. Blake seemed pleased. "Come and see my garden," he said. "Most boys and girls like to see my garden. I made it many years ago for my little grandson."

12. Mr. Blake led the way, and in a few moments we were in his garden. Father was quite right. It was splendid. There were so many things in it that I did not know what to look at first.

2. MR. BLAKE'S GARDEN.—I.

1. At the far end of the garden there was a bank covered with trees and ferns. A little stream of water came tumbling down this bank. Here and there the stream dashed over the rocks in a sheet of foam as white as snow.

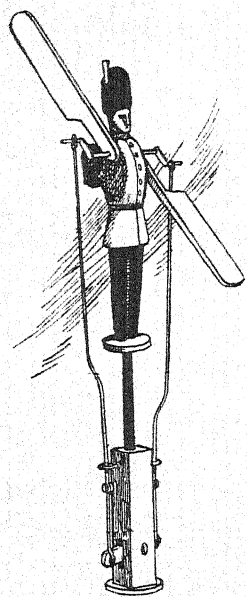
2. The water flowed under a little bridge, and then ran into a pond. Another stream



Gillingham Mill.

(From the picture by John Constable, R.A., in the Victoria and Albert Museum, South Kensington.)

ran out of the pond. It left the garden by a hole in the wall.



3. In one corner of the garden I saw a tall flag-post with a weather-cock on the top of it. In another corner there was a summer-house. A wooden soldier was fixed on the roof. He had long arms, and the wind blew them round and round. Close to the summer-house a fountain was playing.

4. "Look at that little house," cried Kate. "I wonder what it is for."

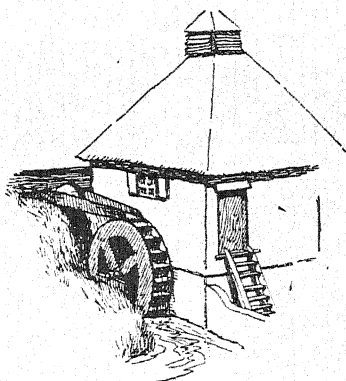
"I will show you," said Mr. Blake. "Come with me."

5. We went up a few steps until we came to the little house. By the side of it we saw a water-wheel. Water from the stream drove the wheel round and round. The wheel worked a little flour mill inside the house.

6. Mr. Blake took off the roof and let us

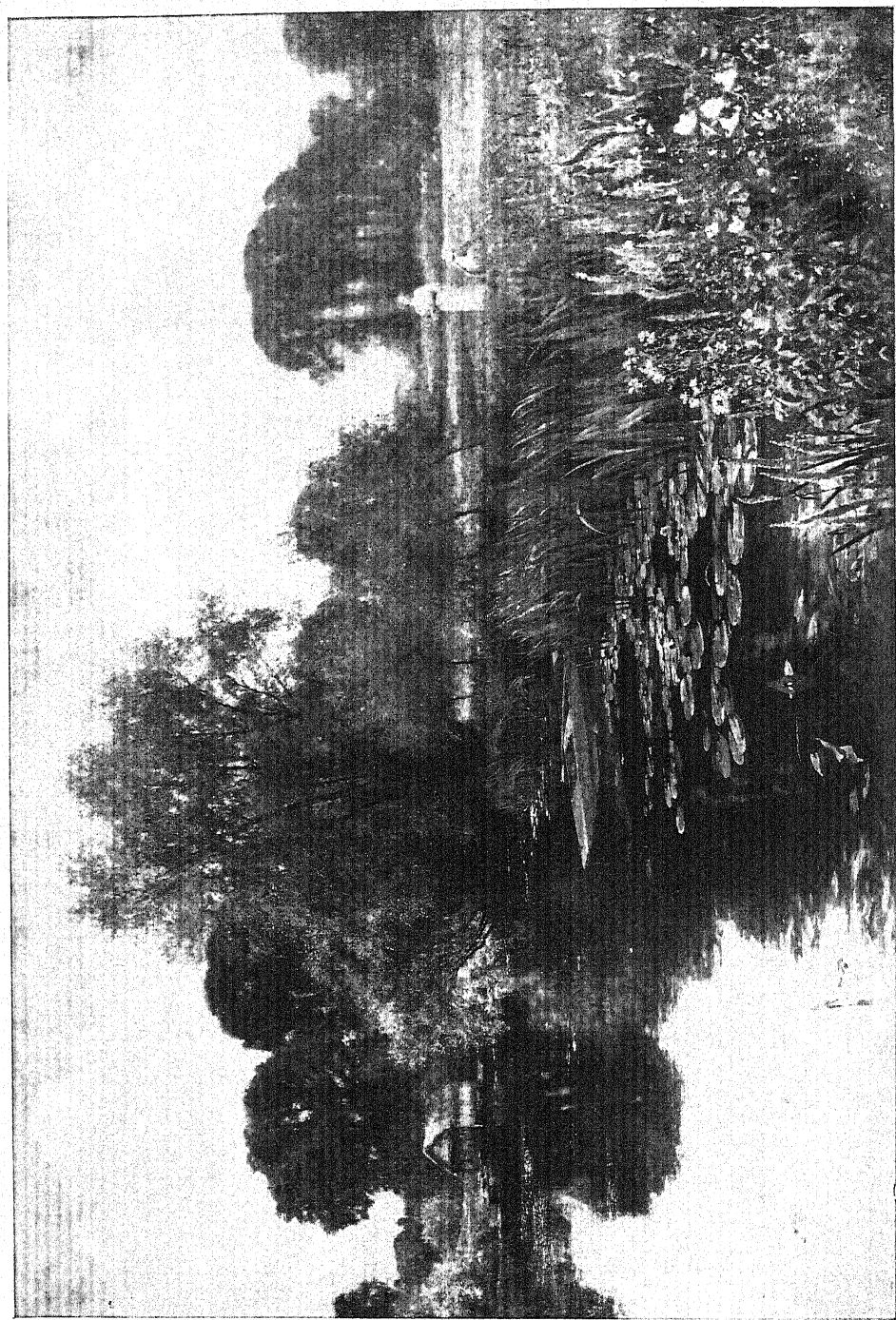
look inside. We saw two flat stones, one on the top of the other. The water-wheel kept them turning round and round. Mr. Blake put a handful of wheat into the hopper, and soon we saw it ground into flour.

7. "You see," said Mr. Blake, "I make the stream do work for me. It grinds wheat into flour, and it can do many other things as well. Now look at my little wooden soldier. He is working very hard to-day."



8. We went down the steps and stood in front of the summer-house. The wind was strong, and the soldier's arms were flying round. "Please, Mr. Blake," I said, "what is he doing?"

9. "He is pumping water," was the reply. "Every time his arms go round he works a little pump. This pump lifts water to a tank on the roof. The water which runs out of the tank sets this little fountain playing."



River Banks and Blossoms.
(From the picture by Yeend Kings, V.P.R.I. By permission of the Artist.)

10. "Now," said Mr. Blake, "let me show you the best thing of all." In front of the summer-house we saw a little railway which ran right round the garden.

3. MR. BLAKE'S GARDEN.—II.

1. While we were looking at the railway Mr. Blake left us, but soon came back with a little engine and train. He put some water into the boiler of the engine, and lighted a little lamp under it.

2. Soon all was ready. Mr. Blake put the train on the rails, and off it went at a great speed. We watched it running in and out of tunnels, and under and over bridges. Oh, it was grand!

3. There were many other wonderful things in the garden, but we could not stay any longer to see them. We thanked Mr. Blake for his kindness, and said good-bye.

4. "No," said Mr. Blake, "I will not say good-bye. You must come and see

me again. Jim will want you, and so shall I."

5. When father came home we told him that we had seen Mr. Blake's garden.

6. "Did Mr. Blake show you the mill, the wooden soldier, and the railway engine?" he asked.

"Yes," we replied, "we saw them all."

"Well," said father, "Mr. Blake showed you three giants at work."

7. "Giants!" we cried. "Does Mr. Blake keep giants? We never saw any giants."

"Oh yes, you did," said father.

8. Then he looked on the bookshelves and took down a little book. "I want you and Kate to read this story," said he. "I read it when I was about your age, and it pleased me very much."

9. Next day I read the story to Kate. It is too long to put into this book, but I must tell you something about it.

4. THE THREE GIANTS.

1. Once upon a time a ship was wrecked on an island where no people lived. The poor folks on the ship got ashore safely, and had to live for many years on the island.

2. They built log huts, and made little fields in which they grew wheat. When the wheat was ripe, they rubbed it into a kind of flour between two stones. The flour which they made in this way was very poor.



3. One of the men, whose name was Neon, tried to think of a way to make better flour. While he was thinking, he walked on and on. At last he came to a part of the island where he had never been before.

4. Suddenly he saw a giant lying on the ground. The giant was many miles long. He was dressed in a robe which looked bright

blue where the sun shone on it. By his side grass and trees were growing.

5. The giant seemed glad to see Neon. "My friend," he cried, "I am ready to work for you if you will show me the way. I am a good servant. I neither eat nor sleep, and I want no wages.

6. "I never get tired, and I work night and day. Let me show you what I can do. Get on my back, and I will carry you home."

7. At first Neon was afraid of the giant, but he soon lost all fear. "I will give you a trial," said he. So he made a kind of box in which he could sit.

8. Then he put the box on the giant's back, and took his seat in it. Off went the giant with the load, and soon Neon found himself at home.



9. You may be sure that Neon and his friends were very glad to have this willing giant to work for them. They made him turn very big stones round and round,

and in this way their corn was ground into fine flour.

10. The giant also brought them wood from the forest and stone from the quarry. He was a great blessing to all the people on the island.

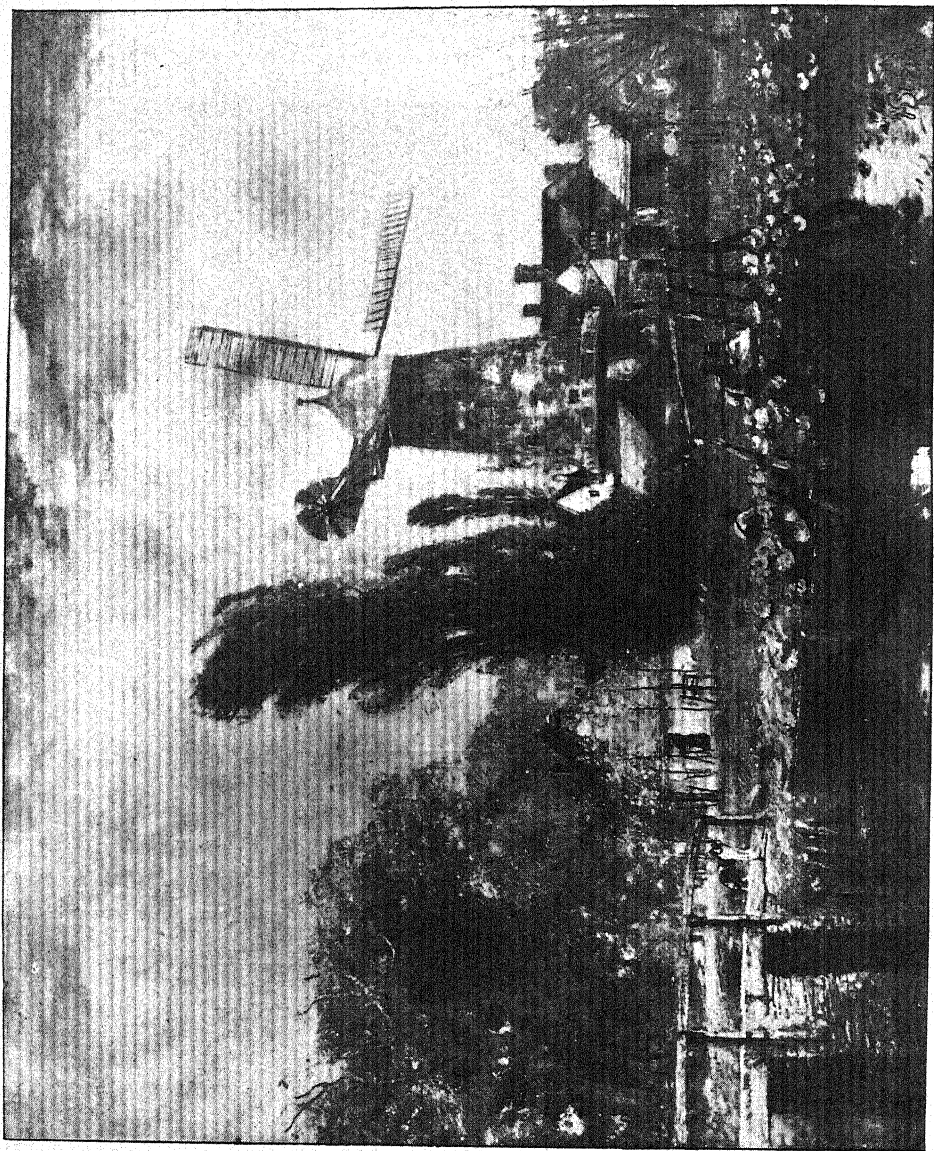
11. I think nearly all boys and girls know this giant and have seen him at work. Can you guess his name?

12. Kate knew his name at once. "I know," she cried. "I saw him working in Mr. Blake's garden, driving the flour mill. His name is *Running Water*."

5. THE SECOND GIANT.

1. One day Neon asked Running Water if there were any other giants on the island.

2. "Oh yes," said Running Water. "I know another giant, but he is no friend of mine. He lives on the hills, while I live on the lowest ground that I can find."



THE WINDMILL.

(From the picture by David Murray, R.A. By permission of the Artist.)

3. "Can he work as well as you?" asked Neon.

"Yes," replied Running Water, "he can work very hard when he likes; but sometimes he is lazy, and will not work at all. Now and then he loses his temper, and does much mischief. He knocks me about until I become very angry."

4. Next day Neon went off to the hills and found the giant. To his delight the giant spoke to him.

5. "I know what you want," he said; "you want me to work for you. Well, I will do so, but you must let me have my own way." Neon agreed to this.

6. "Build me a house," said the giant, "and put arms in front of it. When I feel ready for work, I will twist the arms round and round. In this way I will pump water for you from the well."

7. So saying, he flew into the low ground



where Running Water was carrying a heavy load of planks. "Let me help you," said he. He took his seat on the load, and stretched out his wings. Away they went very fast.

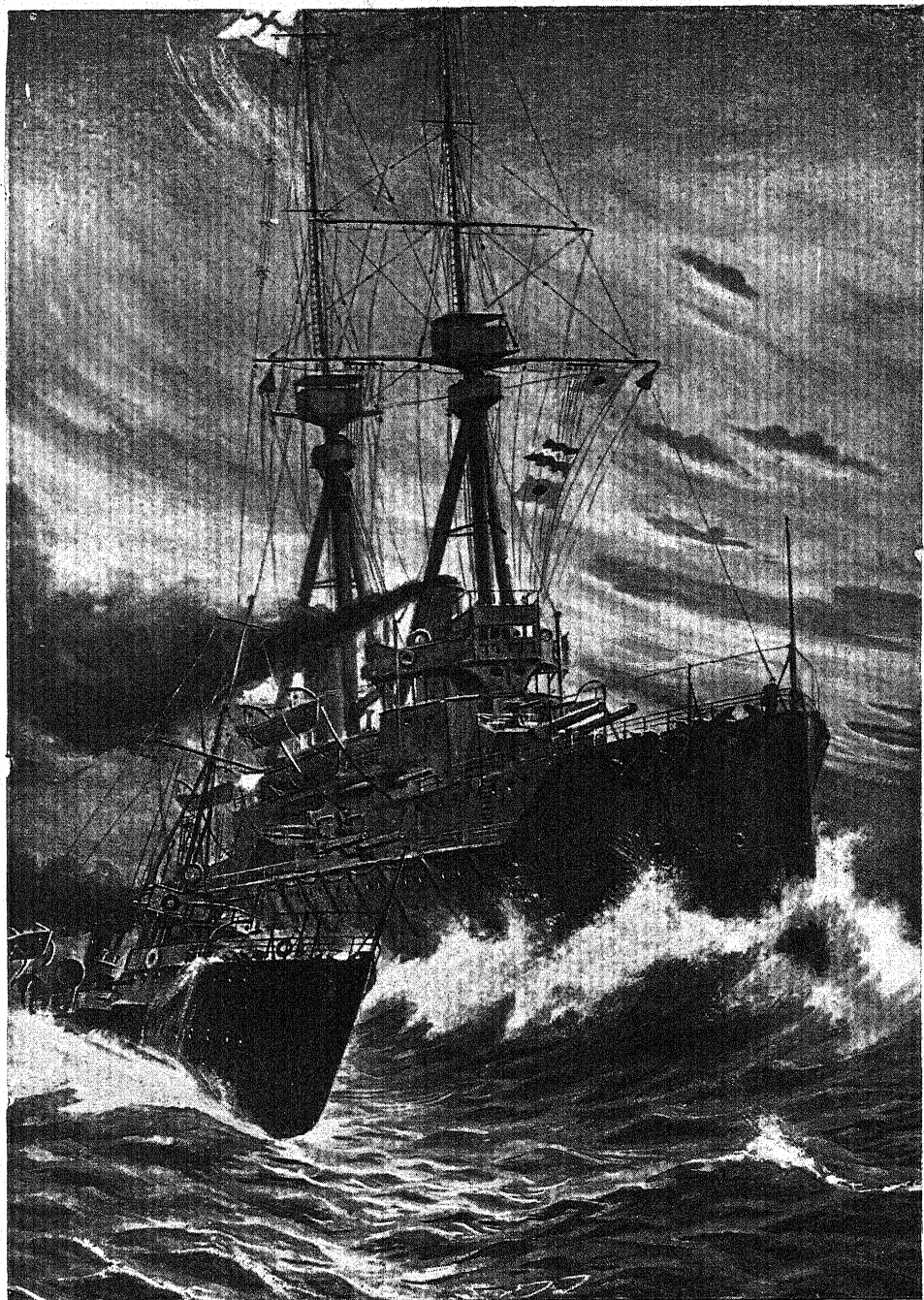
8. After a time the giant from the hills grew tired of going the same way. So he said, "Now, Running Water, I am going to carry the load back to the place from which it came."

"Oh no, you are not," said Running Water. "I won't have it."

9. Then a great quarrel began. The hill giant struck Running Water in the face again and again, until he grew white with rage. The two giants fought together, and as they fought they roared like wild beasts.

10. At length the hill giant grew tired of the fight and flew away. As for Running Water, he grumbled loudly for a time, but at last grew calm again.

11. Neon saw nothing of the hill giant for a long time, but he built a house for him with arms in front of it. One night, however, when Neon was fast asleep, the hill giant came back.



Wind, Wave, and Steam.

12. At once he began to work very hard. By morning he had gone again, but in the night he had pumped up enough water to last for a week.

13. "I can easily guess the name of this new giant," said Kate. "I saw him at work in Mr. Blake's garden to-day. He was blowing the wooden soldier's arms round and round. His name is *Wind*."

6. THE THIRD GIANT.

1. One day Running Water said to Neon, "I know a young giant who might work for you. He is my son, but he is very wayward and will not live with me."

2. "Is he strong?" asked Neon.

"Yes," said Running Water; "he can do more work than Wind and I together. But I must warn you that he is very hard to catch."

3. "He will not do a stroke of work unless you shut him up in prison. Then he will work very hard to get out."

4. "Wind and I eat nothing, but my son is a great feeder. He will eat as much coal and wood as you can give him, and then want more."

5. Neon searched a long time for this giant, but in vain. One day he was boiling water in a kettle, when suddenly the lid flew off. Out came the giant and rushed up the chimney.

6. "I am afraid that he is of no use," said Neon. "I can catch him, but I cannot keep him." So he went to Running Water and asked him what he ought to do.

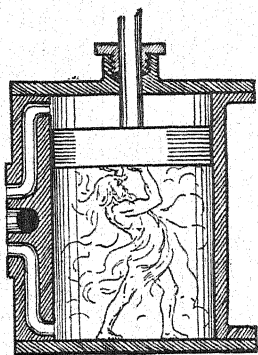


7. "Make a prison for him," said Running Water. "Put him in an iron box which has one side that will slide up and down. He will try very hard to get out, and in doing so he will push this side up as far as he can."

8. "When he finds that he cannot get out he will push the side down again. He will go

on doing this just as long as you keep him in prison and feed him well."

9. Neon set to work, and made an iron box with a side that would slide up and down. He then put water in a boiler and made a fire underneath. Out came the giant and flew into the box. Then he fought so hard to get out that the side went up and down very quickly.



10. "Now," said Neon, "I have caught the most useful giant of all. There is no end to the work which he can do for me.

11. "I can make him lift coals or water out of a mine. I can make him run along rails and drag a train after him. I can make him drive a ship across the sea. He is the best giant of all."

12. "I know his name," cried Kate. "He is called *Steam*. I saw him at work in Mr. Blake's garden to-day. He was drawing the train."

7. FATHER AND SON.

1. Next morning we called at Mr. Blake's house and asked how Jim was. The maid said that his leg was much better, and that we were to come in.

2. Mr. Blake was in his study, and Jim was lying on a mat in a corner of the room. He licked my hand when I patted him.

3. Before long Kate was telling Mr. Blake about the three giants.

"Which of them do you like best?" he asked.

"Oh, *Running Water*," said Kate. "He is so steady and quiet."

4. "I like *Steam* best," I cried. "When I grow up I shall drive a steam engine."

5. "I want to ask you something, Mr. Blake," said Kate. "Running Water said that Steam was his son. How can that be?"

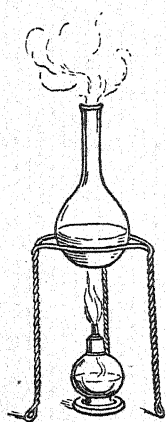
6. "I think I can show you," said Mr. Blake. He took a glass bottle or flask out of a cupboard, then a stand and a lamp.

7. He put some water into the flask and put it on the stand. Then he lighted the lamp and put it under the flask. Soon the water was boiling. Above the mouth of the flask we could see a little cloud rising up into the air.

8. "Now," said Mr. Blake, "you plainly see that Steam is the son of Water. The water has become steam."

9. "Why is there no steam *inside* the flask?" I asked.

"There *is* steam inside the flask," replied Mr. Blake. "You cannot see it because the steam inside the flask is hot. When steam is hot it cannot be seen.



10. "When the steam comes out of the flask into the air, it loses some of its heat. Then you can see it quite well. It forms a little cloud.

11. "Now let me show you how we can turn steam back into water again."

Mr. Blake held a cold plate in the cloud of steam.

12. Soon we saw the plate covered with tiny drops of water. The plate had made the steam cold, and by doing so had turned it back into water.



13. "I see," said Kate. "Steam has come back to his father again, because he found the weather too cold outside."

8. WATER IN THE AIR.

1. "I wonder where running water comes from?" said Kate.

2. "Oh!" I cried, "everybody knows that. It comes from the rain that falls from the sky."

"Yes," said Kate, "but how does the rain get up into the sky? That's what I want to know."

3. "Did you see the pools of water on the road yesterday?" asked Mr. Blake.

"Yes," replied Kate; "I stepped into one of them."

"Where is the water this morning?"

"All gone," said Kate.

4. "Where has it gone?" asked Mr. Blake.

Kate did not know, and I was not sure.

"It has gone up into the sky," said Mr. Blake.

5. "The heat of the sun has turned the water into what we call vapour. It is not hot enough to be called steam. All day long, vapour is rising from every sheet of water. We cannot see it rising, but we know that it does so.

6. "Come, I will show you that there is water-vapour in the air."

Mr. Blake took a tumbler, and rang the bell for the maid. "Please bring me a piece of ice," said he. "There is some in the box of fish that came this morning."

7. When the maid brought the ice, Mr. Blake said, "Look at the outside of the tumbler. It is quite dry.

8. "I am going to put some pieces of ice

into the tumbler. When I do so, I want you to notice what happens."

9. We looked carefully, and saw that the outside of the glass became cloudy. When I rubbed it with my finger, I found that it was wet. Where had the water come from?

10. The water had come from the water-vapour in the air. The ice made the tumbler cold. The cold glass cooled the air around it, and the water-vapour in the air was turned back again into water. How simple it is—when you know!

9. THE FATHER OF THE GIANTS.

1. "Does all the water-vapour in the air come from the puddles?" asked Kate.

Mr. Blake smiled. "No, my dear," he said. "Have you ever seen the sea?"

We told him that we once spent a whole month at the sea-side.



2. "Well," said Mr. Blake, "when you stood on the shore you saw nothing but water as far as your eye could reach. What a vast stretch of water it was! Yet you only saw a very small part of the ocean after all.

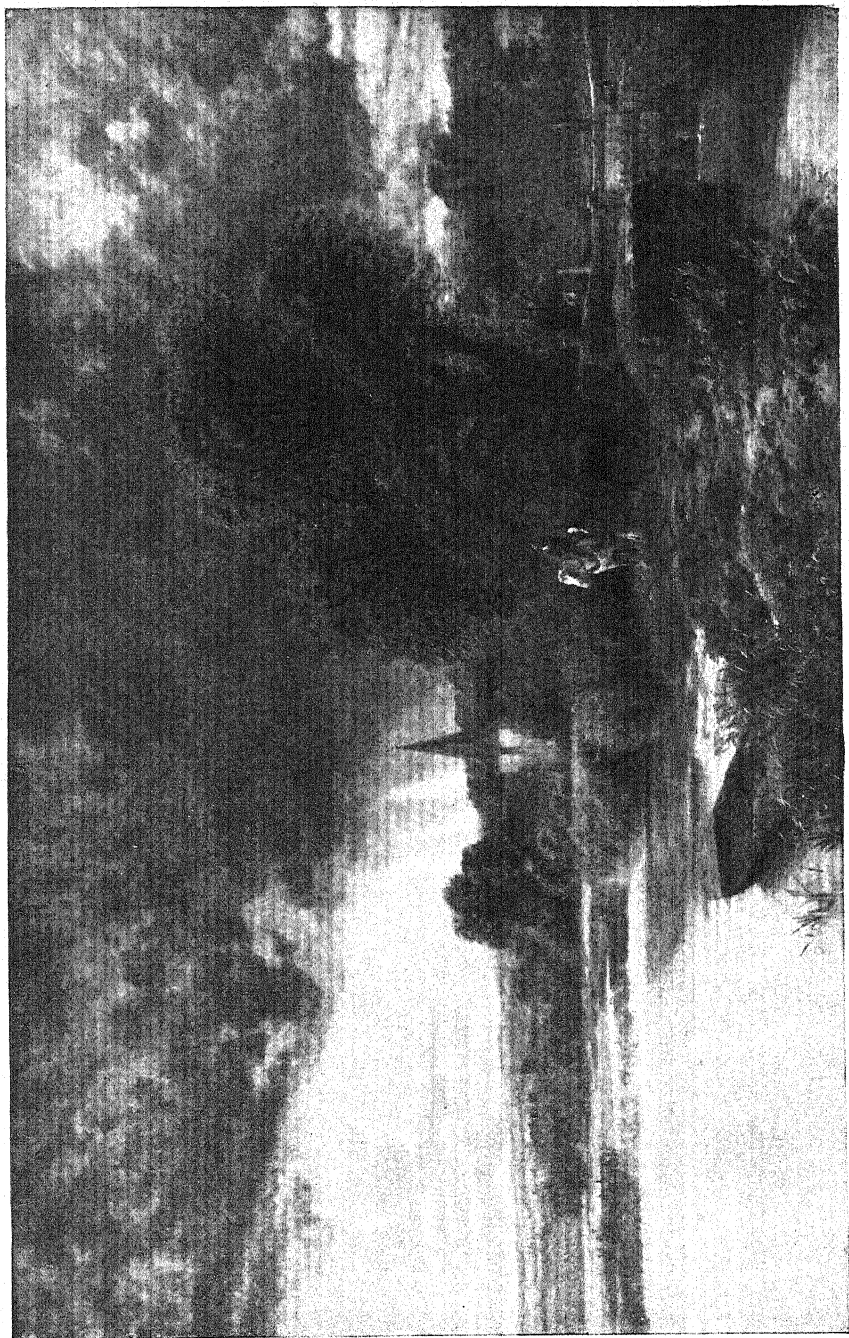
3. "There is three times as much sea as dry land on the earth. The water-vapour in the air nearly all comes from the sea."

4. "But how does the sea get up into the air?" asked Kate.

"Let me ask *you* a question," replied Mr. Blake. "How did the water in my flask get into the air?"

"You made it hot with the lamp," I said, "and then it became steam and rose up."

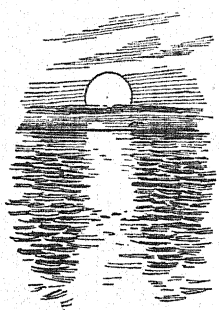
5. "That is just what happens in the case of the sea. There is a big lamp shining upon it day by day. It turns some of the sea into water-vapour, which rises up into the air. You cannot see it rising, but it *is* rising all the same."



A Showery Day.
(From the picture by Vicat Cole, R.A.)

6. "I suppose," I said, "that the big lamp is the sun."

"You are quite right," he replied. "The sun gives light and heat to the earth. Without the heat of the sun we should all die of cold.



7. "Without the sun's light the earth would be in darkness. Nothing would grow, and we should all starve.

8. "Without the sun's heat there would be no running water, no wind, and no steam. So you see that the sun is the father of the three giants.

9. "The sun is a great ball of fire. It does not look very big to you, but that is because it is so far away. The sun is more than a million times bigger than the earth.

10. "Suppose a fast train could run from the earth to the sun. How many years do you think it would be on the way? More than two hundred and ten years."

10. CLOUDLAND.

1. When mother called us next morning, the rain was falling very heavily. The sky was black, and there seemed to be no break in it anywhere. We had to stay indoors all day.

2. Next morning when we woke the sun was shining brightly. The sky was full of great white clouds. The wind was blowing the clouds along, and tossing the branches of the trees to and fro.



3. After breakfast we went to Mr. Blake's to see how Jim was. As we came up the garden path Jim heard us, and began to bark. It was funny to see him come hopping to the door on three legs.

4. We were just going away when Mr. Blake came out. "Come in, my dears," he said. "We will have a chat. What shall we talk about?"

5. "The clouds, if you please," cried Kate. "I have been watching them all morning."



After a Three Days' Gale.

(From the picture by Edwin Ellis in the Nottingham Art Gallery.)

6. "Have you noticed that there are different kinds of clouds?" asked Mr. Blake. "Sometimes they are in great white heaps, as they are this morning. Sometimes they are dark and almost cover the sky, as they did yesterday. At other times they are thin and light.

7. "Sometimes they are high up, and sometimes they are so low down that they lie on the ground. Very early this morning the clouds were on the ground. I could hardly see across my garden.

8. "When the clouds lie on the hills or on the ground we call them *fog* or *mist*. There are often fogs at sea, and they are a great trouble to sailors.

9. "Ships 'go slow' in the fog, and blow their foghorns to let other ships know where they are. Many a good ship has run ashore or has crashed into another ship and gone to the bottom during a fog.

10. "One day last summer I climbed the highest hill in England. I climbed up through the clouds. The higher I climbed the clearer

the sky became. Soon I found myself above the clouds altogether.



11. "The sky was blue above me, and down below were the white clouds rolling about like a stormy sea. Men in balloons or airships often soar high above the clouds."

11. MOVING AIR.—I.

1. "Yes," said Mr. Blake, looking out of the window, "Giant Wind is working very hard. The wooden soldier's arms are flying round so fast that you can hardly see them."

2. "Can you imagine what the sea will be like to-day? The 'white horses' will be tossing their manes out in the bay. They will be galloping to the shore in long lines of snowy foam."

3. Mr. Blake opened a book and showed us the beautiful picture which is printed on page 36. "Look at the picture," said he.

"A storm has been blowing for three days. The worst of it has now passed; the wind is dying down and the sky grows brighter every hour.

4. "The sea, however, is still very rough. When the great waves beat against the harbour walls they leap high above them in clouds of spray.

5. "A ship is coming into the harbour. Her sails are torn. She has fought a fierce battle with wind and wave. Not far away you notice a little tug boat fighting its way out to sea.

6. "Look at the fisher folk on the wall. Most of them are women and children. Their husbands, brothers, or fathers are away in the fishing boats. Oh, how anxious these watchers are!

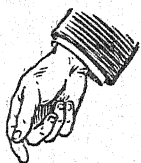
7. "Through the days and nights of storm they have been praying,—

‘Oh, hear us when we cry to Thee
For those in peril on the sea.’

Perhaps their prayer has been granted. Let us

hope that the boats have ridden out the storm safely. What joy there will be when the fishermen return safe and sound to their wives and children !”

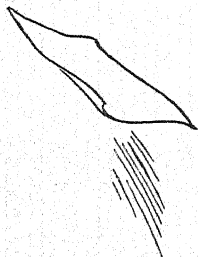
8. “ Mr. Blake,” I said, “ what makes the storm ? ”



“ The wind,” he replied.

“ And what makes the wind ? ”

“ It is not easy,” said he, “ to answer that question in a simple way. But I will try.



9. “ Here is a sheet of paper. See ! I let it fall. It does not drop to the ground all at once. It sways to and fro, and falls gently. There seems to be something in the way.

10. “ There *is* something in the way. It is the air. There is air all round us. If there were no air we could not live. We breathe air.

11. “ You cannot see the air, but it is there all the same. Wave your hand to and fro.

Now you feel the air moving. You have been making a little wind.

12. "Kate makes a little wind when she uses her fan. Wind is nothing but air that is moving."

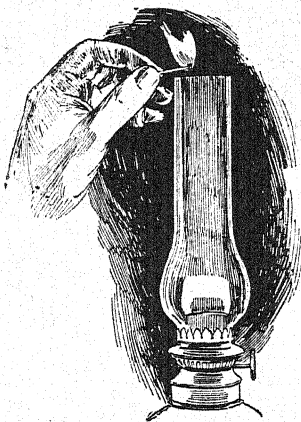
12. MOVING AIR.—II.

1. "Here is a lamp with a chimney. I will light the lamp."

Mr. Blake did so. Then he struck another match and held it above the chimney. "Watch," said he.

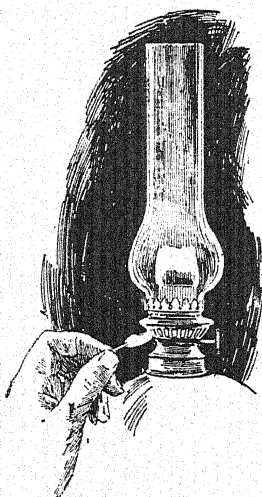
2. We looked carefully, and saw that the flame of the match was blown away from the top of the chimney. "Why is that?" I asked.

3. "The heat of the lamp," said Mr. Blake, "makes the air in the chimney hot. When air is heated it rises. The air in the chimney is flowing



out at the top and is blowing the flame of the match away."

4. Mr. Blake held a little mill made of paper above the chimney. We were much pleased to see the rising air blowing the arms of the mill round and round.



5. Mr. Blake now struck another match and held it near the holes at the bottom of the chimney. This time the flame of the match was drawn inward and not blown outward.

6. I puzzled a good deal over this, but at last I understood. While hot air is rising in the chimney cold air is moving in through the holes to take its place. This stream of air draws the flame of the match inward.

7. "Now," said Mr. Blake, "the big lamp which we call the sun acts in much the same way as this lamp. It makes the air in some places hotter than it is in other places.

8. "The hot air rises, and the colder air flows in underneath to take its place. This moving of the air makes the wind.

9. "Sometimes the wind moves very quickly. Then we say it blows a *gale* and there is a storm. If the wind moves less quickly we say there is a *breeze*. When we cannot feel it moving we say there is a *calm*.

10. "Sometimes the wind comes rushing along from the hot parts of the world. Then it is a warm wind. Sometimes it blows from the cold parts of the world. Then we have a cold wind.

11. "Sometimes it blows over thousands of miles of land before it crosses our narrow seas and comes to us. Then it is a dry wind.

12. "Sometimes it comes to us after blowing thousands of miles over the sea. Then it is a wet wind."



13. THE RAIN.

1. "The clouds are nothing but water-vapour that has been cooled," said Mr. Blake. "Do you know how clouds are turned into rain?"

Kate wished to answer this question, so I let her.

2. "I know," she cried; "you put a cold plate in them."

I *had* to laugh out loud, but Mr. Blake only smiled.

3. "I am afraid," he said, "that a plate would not be of any use. But you are not much wrong after all. What you really mean is that the clouds must be cooled still more. Well, how can this be done?"

4. We did not know, so Mr. Blake told us.

"Suppose a cold wind were to blow against the clouds. What would happen?"

"The clouds would be made colder than they were before," I replied. "They would be turned into water."

5. "Yes," said Mr. Blake; "the tiny drops of water that make up the cloud would run together. They would form big drops of water, and these would fall down as *rain*."

6. "There is another way in which the winds make the clouds cold. You know that the higher we go up in the air the colder it becomes. The air is always colder on the top of a mountain than it is down below."

7. "Suppose the wind is blowing the clouds along, and that there are mountains in the way. What will happen?"

8. "The clouds cannot go through the mountains; they must go over them. The wind forces them to mount higher and higher."

9. "As they climb up and up they grow colder and colder. The little drops of water in them grow bigger and bigger. At last they come splashing down as rain. Where there are many mountains there is sure to be much rain."

10. "When the weather is very cold the rain-drops are frozen as they fall. Then they come to us as *hail* or *snow*."

14. A WEATHER-PROPHET.

1. My father is what they call a weather-prophet. If there is going to be a picnic people come to him and say, "Is it going to be fine, Mr. Jones?"



2. Father goes outside and takes a good look round. Then he tells them what sort of a day it is going to be. He is wrong sometimes, but not often.

3. One morning I asked him how he did it. "First," he said, "I notice the smoke coming out of the chimneys.

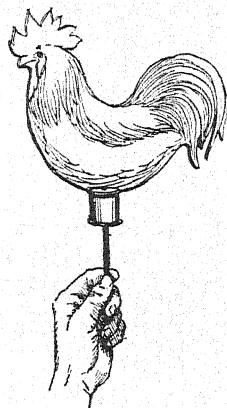
4. "When there is much water-vapour in the air the smoke does not rise. When there is not much water-vapour in the air the smoke rises.

5. "By looking at the smoke I can tell whether the air is wet or dry. If the air is wet, there is likely to be rain. If the air is dry, the day will be fine.

6. "Next, I find out which way the wind is blowing. If the wind is coming from a dry quarter, I do not expect any rain. If the wind is coming from a wet quarter, I tell people to put off their picnics."

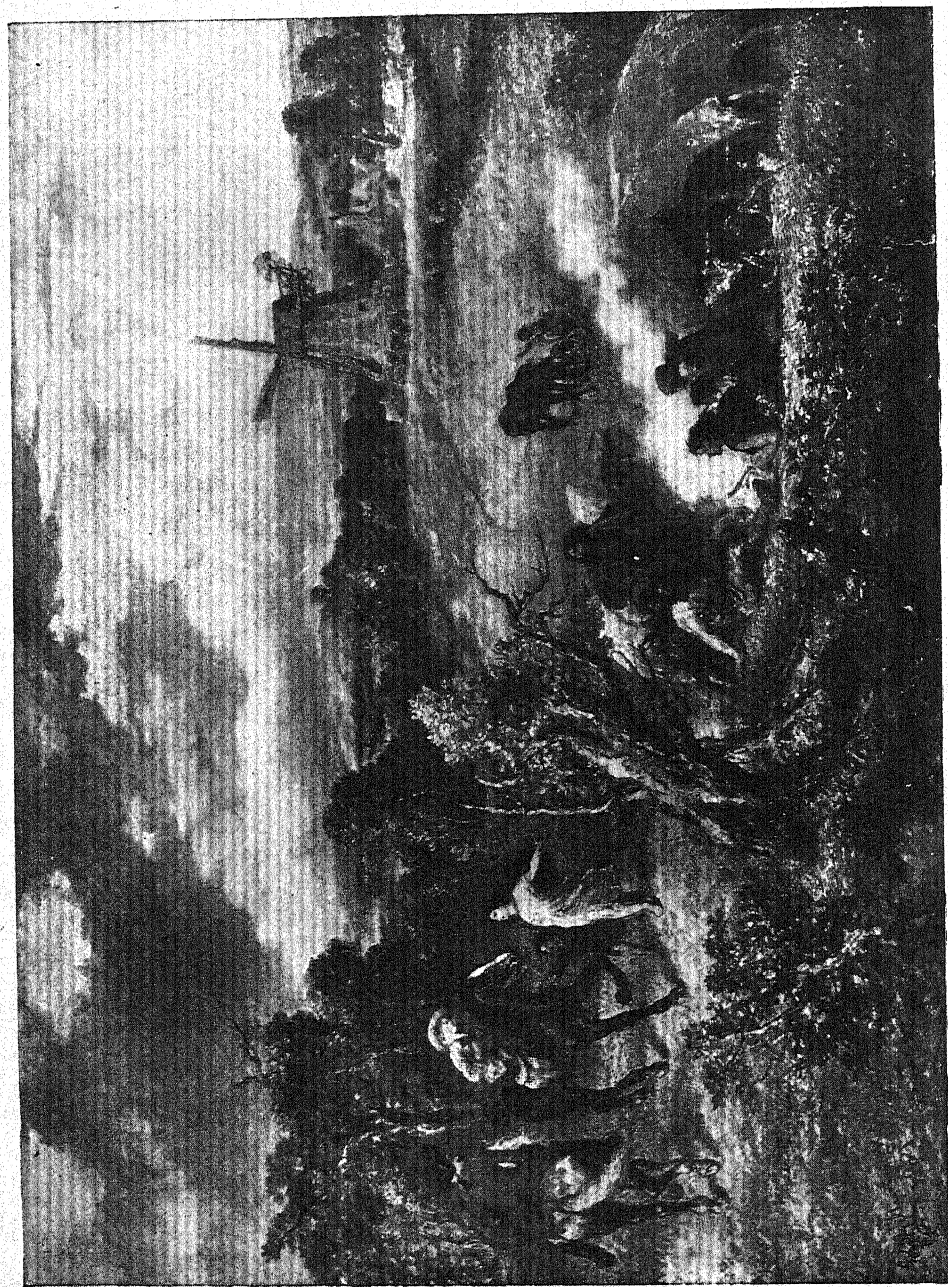
7. "Thank you," I said; "I shall be a weather-prophet too. But how can you tell which way the wind is blowing?"

8. "Look at the weather-cock on the church tower," he said. "Here, we will make a weather-cock, and then you will understand how it works."



9. He cut out the shape of a cock in cardboard. Then he glued a bobbin beneath it. When he had put a lead pencil in the bobbin he gave it to me. "Here," he said, "is our weather-cock."

10. I played a good deal with the weather-cock, and so did Kate. We found out that when you blow it, the head of the cock always comes round to your mouth.



ASKING THE WAY.
(From the picture by Sir John Gilbert, P.R.A., in the Walker Art Gallery, Liverpool.)

11. I told father what we had noticed. "Yes," he said, "the head of the cock always points to the quarter *from which* the wind is blowing."

15. THE POINTS OF THE COMPASS.

1. Next day Kate and I went to the churchyard. We meant to have a good look at the weather-cock on the church tower.

2. Underneath it we saw four arms sticking out. There was a letter at the end of each arm. The letters were N. E. S. W.

3. Just then Mr. Blake passed by. "Good-morning," he said. "Jim has got his splints off and is having his first walk."

4. We were very glad to see dear Jim all right again. How he barked and wagged his tail! I don't think he will ever go near motors again.

5. We played with Jim for some time; then Kate said, "Please, Mr. Blake, what does N.E.S.W. spell?"

6. "It doesn't spell anything, dear," he said. "Why do you ask?" Kate pointed to the letters at the end of the arms below the weather-cock.

7. "Oh, you mean the letters which stand for the points of the compass. I understand now. N. stands for North, E. for East, S. for South, and W. for West."

8. Kate did not look any wiser, so Mr. Blake began to explain. "You know that at the cross roads there is a post with four arms.

9. "On one of the arms you read, 'To Barton;' on another, 'To Grange;' on a third, 'To Whitehouse;' and on the fourth, 'To Stone.'

10. "The four arms point out the way to these places. They guide people who do not know the road. The four arms below the weather-cock also point out the way.

11. "If I say a place lies north or south of us, you can easily tell which way you must travel to get to it. Look for the arm with the N. or S. at the end of it; then walk the way in which the arm points."

12. Mr. Blake drew four lines on the ground with the end of his walking stick. The four arms pointed the same way as the four arms below the weather-cock.

13. Then he made us stand where the four arms met. He put us back to back, and told Kate to walk to the north, while I was to walk to the south; then I had to walk to the east, while Kate walked to the west.

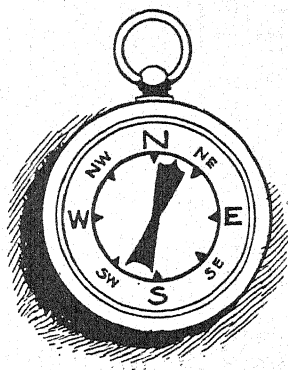
14. We had quite a merry game at this, and now we know the four chief points of the compass quite well.

16. THE NORTH AND SOUTH FINDER.

1. "Father," I asked one day, "what is that thing hanging from your watch chain?"

"It is my north and south finder," he replied.

"Do let me see it."



2. Father took it off his watch chain and showed it to me. It was a little brass box with a glass top. Inside the box there was a sort of watch hand moving to and fro. Father called it "the needle," though it did not look like a needle.

3. "How does it work?" I asked.

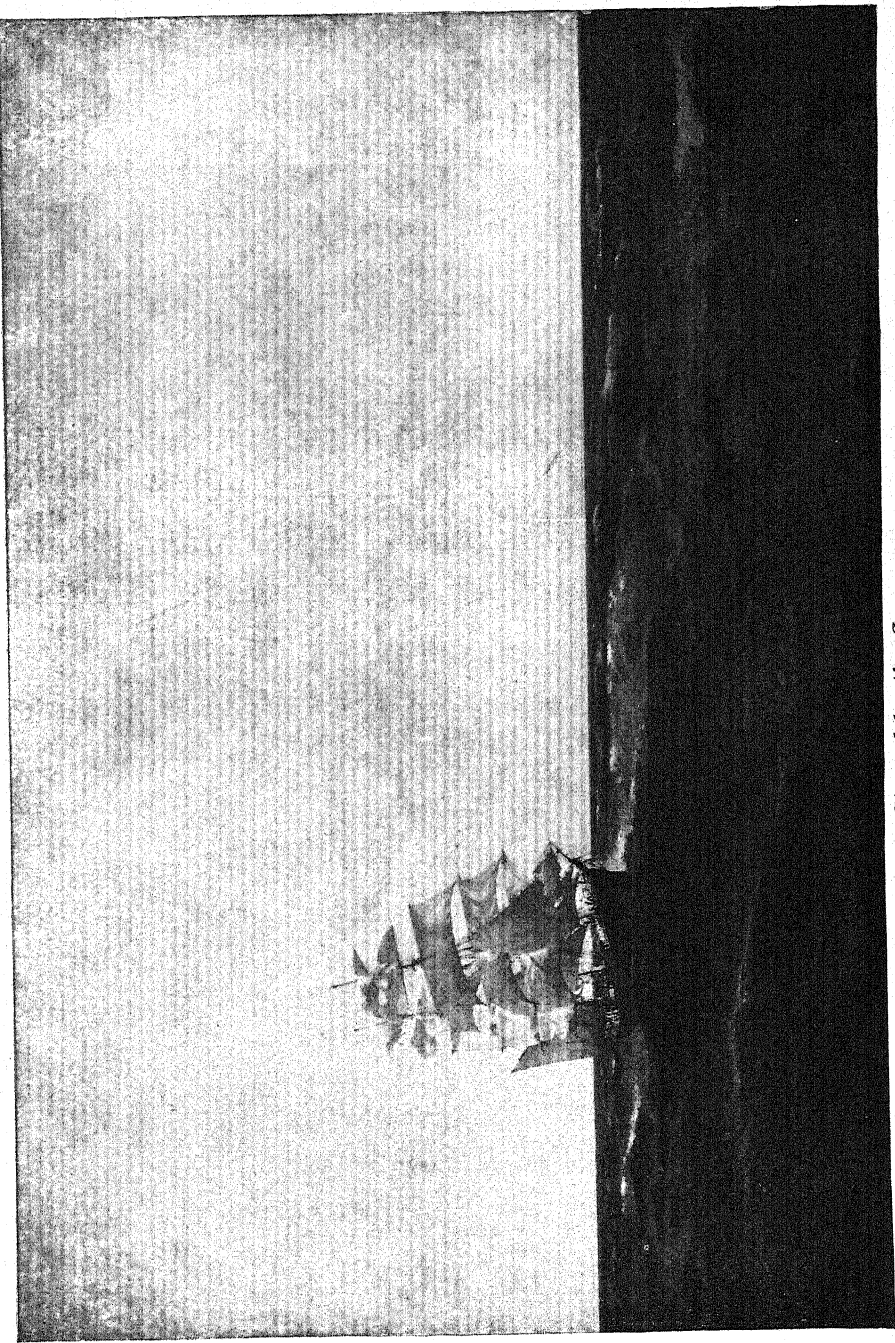
Father put it on the table, and in a short time the needle came to rest. "Now," said father, "the blue end of the needle is pointing northwards, and, of course, the other end is pointing southwards."

4. Father twisted the little box round and round, but the needle pointed the same way all the time.

"It is wonderful," I said. "Kate ought to see this." I called her and showed it to her.

5. "This needle," said father, "is a bit of steel which has been made into a magnet. Let me see. I think we have a magnet somewhere in the house."

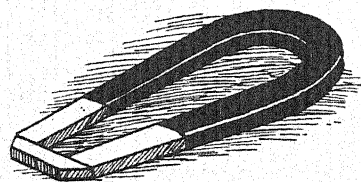
He searched in a drawer, and found a heavy piece of steel shaped like a horseshoe.



Steered by the Compass.
(From the picture by Thomas Somerscales in the Walker Art Gallery, Liverpool.)

6. We had great fun with the magnet. Father showed us that it would pick up and hold bits of steel and iron. It would not pick up bits of wood or paper, or anything else but steel and iron.

7. "We can make other magnets with this," said father. He took a thin strip of steel out of his tool box and showed us that it would not pick up and hold bits of steel or iron. "It is not a magnet," said he.



8. Then he stroked the steel with the horse-shoe from end to end. "Now it is a magnet," he cried. "Try it." We did so, and father was quite right.

9. "Now I will make a north and south finder of this strip of steel," said father. He did so, and hung it up by a piece of cotton.

10. It swung to and fro, and then came to rest. Then we saw that one end pointed northwards and the other end southwards.

11. "Where is your east and west finder?" asked Kate.

12. "I do not need one," said father. "Draw a line north and south, and you can find the other points of the compass for yourself. Can you tell me how?"

17. MARCO POLO AND THE COMPASS.

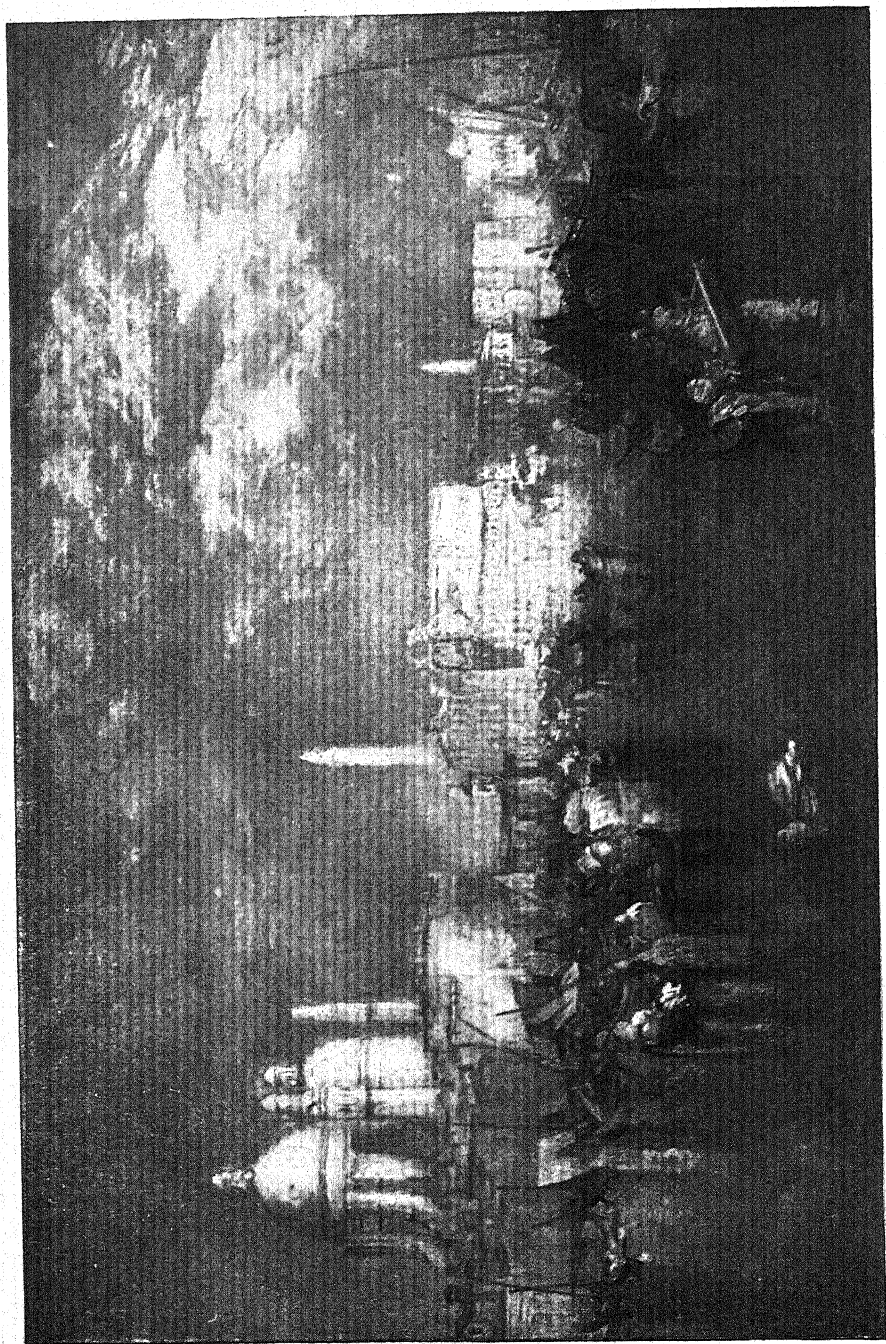
1. Father sometimes calls his north and south finder a compass. He says that it is the sailor's best friend. Without it sailors could not find their way across the wide sea.

2. Until men had the compass to guide them they did not dare to sail far out of sight of land. Without the compass we should never have known much about the world.

3. "Who first found out the compass?" I asked.

"We do not know," replied father. "Some people say that the Chinese used it ages ago. They also say that a man named Marco Polo first brought it to Europe.

4. "Marco Polo was born in the beautiful old city of Venice more than six hundred and



The Grand Old City of Venice.
(From the picture by J. M. W. Turner, R.A.)

fifty years ago. His father used to visit far-off lands in the East to buy and sell goods.

5. "Young Marco went with his father, and soon became very fond of travel. Then he made long journeys alone. He went to China, where no white man had ever been before.

6. "He lived with the king of China for twenty-four years. While he was in China he saw the Chinese using the magnet to guide them on their journeys.

7. "At last Marco wished to go home to Venice. The king would not listen to him at first, but after a time he let him go. When he said good-bye to Marco he gave him many rich jewels.

8. "Marco sewed the jewels in his clothes, and began his long march to Venice. When he reached the city he was in rags.

9. "None of his friends knew him. They could not believe that this ragged fellow was Marco Polo, the rich trader.

10. "Marco made a great feast, and asked his friends to come to it. When the feast was

over he ripped up his old clothes, and took from them all his rich jewels. When the guests saw the jewels they knew him at once!

11. "Marco told his friends all about the Chinese. Amongst other things he told them about the magnet. In this way the people of Europe first learnt the use of the compass."

18. THE SHIP'S COMPASS.

1. One day soon after our talk with father Mr. Blake sent us a note. In it he asked us to come and sail boats with him on his pond.

2. What fun we had! I sailed a beautiful little ship with big white sails. Mr. Blake and Kate sailed a little steamboat. Of course the steamer beat my sailing boat very easily.

3. When we were tired of sailing the ships, Mr. Blake and I had a little talk. I told him about father's compass, and asked him if he had one too.

4. "Oh yes," he said, "I have a ship's compass in my cupboard. Would you like to

see it? I bought it many years ago for the little grandson who used to live with me."

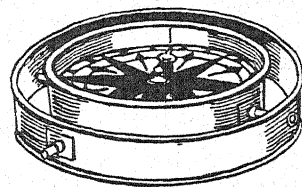
5. Mr. Blake opened the cupboard and took out a square wooden box with a glass top. "Here it is," he said.

He put it on the table, and we looked at it.

"Where is the needle?" I asked. "I don't see it."

6. Mr. Blake took off the glass top, and we saw a brass bowl with a large, round card in it. He lifted out the card and showed us a sharp piece of brass sticking up from the bottom of the bowl. On this the card rested.

7. We had a good look at the card. The North, South, East, and West were marked on it. There were also many points which I had not seen before.



8. Then Mr. Blake turned the card upside down, and showed us not one needle, but three needles. They were fastened to the card, and were fixed side by side, some distance apart.

9. "These needles are so fixed," said Mr. Blake, "that the arrow-head on the card always points to the north. The sailor looks at the face of the card."

10. "How does he steer by it?" I asked.

Mr. Blake showed me an upright line on the inside of the bowl. "That line," he said, "stands for the bow of the ship.

11. "Suppose the captain wishes the ship to sail west, the sailor moves the rudder until the W on the card points to the upright line. As long as he keeps the ship going that way she is sailing west.

12. "Just one thing more," said Mr. Blake. "You know that a ship at sea pitches and rolls from side to side. Look, I will make the box pitch and roll, just as the ship would do. What do you notice?"

13. We noticed that no matter how much the box pitched and rolled, the card in the bowl was always level.

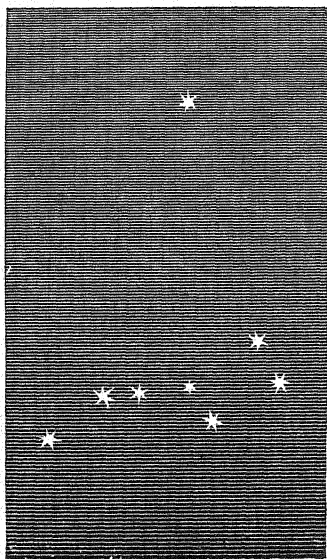
14. "That is the way I should like to be when I go to sea," said Kate.

19. THE PLOUGH.

1. We stayed to tea with Mr. Blake, and then we played at building up puzzle pictures. It was quite dark when we went home.



2. Mr. Blake walked with us part of the way. As we were saying good-bye he looked up to the sky and cried, "Ah! there's the Plough! Ask father to tell you about it."



3. You may be sure that we did not forget to do so. Mother wished us to go off to bed at once, but father begged her to let us stay up just a little longer.

4. We went outside. "Look there," said father, pointing to the sky. "What do you see?" We saw seven stars like this.



LIGHTS THAT GUARD AND GUIDE.
(From the picture by Louis Grier. By permission of the Artist.)

5. "Suppose you could draw a line from one to the other of these stars," said father, "what shape would it be?"

I thought it would be the shape of a plough. Kate said it was more like a hatchet or father's pipe with the bowl turned down.

6. "That's the Plough," said father. "You can see the handle and the share. Look at the two stars at the end of the share. If you could join them by a line and then carry on the line about four times as far again, you would come to yonder bright star.

7. "This is called the North or Pole Star. It is in the north part of the sky. When you face the Pole Star you are looking to the north. Turn right round, and you are looking to the south.

8. "Now you know another way of finding the points of the compass," said father. "If the night is clear you can always find your way by means of the Pole Star. In olden days sailors used to steer by it.

9. "We can only see the Plough in the

northern half of the world. In the southern half of the world there is no Pole Star, but there is a cluster of stars which takes the place of our Plough. It is called the Southern Cross."

10. When I went to bed I lay awake for some time thinking about the Plough. When I grow up I shall be a trapper in the woods. Then I shall find the Pole Star very useful.

20. A TALK AT SUNSET.

1. "Come out, children," said father—"come out and look at the sunset."



2. The sun, like a great rosy ball, was sinking behind the trees. I thought it looked much bigger than in the middle of the day.

3. The sky was more beautiful than any picture that I ever saw. Some of the clouds were like islands of shining gold floating in a pale blue sea. As the sun sank lower and lower the clouds turned to red and purple.

4. We stood watching the sky until the sun sank out of sight. Then father said, "We shall have a fine day to-morrow.

'A red sky at night is the shepherd's delight,
A red sky in the morning is the shepherd's warning.'

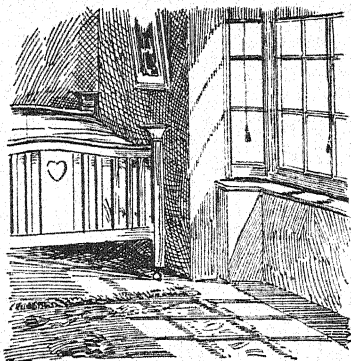
5. When we went indoors, father put his compass on the table.

"In what part of the sky did the sun go down?"

I knew without looking at the compass. "In the *west*," I said.

6. "Quite right," said father. "The sun sets somewhere in the western part of the sky. It rises somewhere in the eastern part of the sky. Where is it at noon?"

7. Kate knew. "It shines right in at my bedroom window," she said. "I was in my room about twelve o'clock yesterday, and I had to pull down the blind because the sun was in my eyes."





Good Night to Skye.

(From the picture by Colin Hunter, A.R.A., in the Glasgow Corporation Art Galleries.)

8. "On which side of the house is your bedroom?" asked father.

We both knew. "On the *south* side," we cried.

"Yes," said father. "Remember this—in *the northern half of the world the sun is always in the south at noon.*"

9. "Why, that's another way of finding the points of the compass!" I cried. "All you have to do is to face the sun at twelve o'clock. Then you are looking south. You can find the other points of the compass quite easily."

10. "Is the sun never in the north?" asked Kate.

"Not in the northern half of the world," replied father. "In the northern half of the world we never see the sun in the north part of the sky."



21. SUNSHINE AND SHADOW.

1. When I went to bed that night I was seven years of age. When I woke up the next morning I was eight years of age. It was my birthday.

2. At breakfast mother and father and Kate wished me many happy returns of the day. Then they each gave me a present.

3. Mother gave me a book, and Kate gave me a pocket-knife. Father's present was the best of all. He gave me a watch. I had longed for a watch of my own. I wonder how father knew.

4. After breakfast Mr. Blake's maid brought me a letter. It said that Kate and I were to take tea with him that afternoon.



5. I had a very happy birthday. In the morning I played cricket with some of my school-fellows. I came home at a

quarter to twelve and found father sitting on a bench in the garden.

6. "Come here, Tom," he said. "I want to show you something." He took the compass off the end of his watch chain and placed it on the bench.

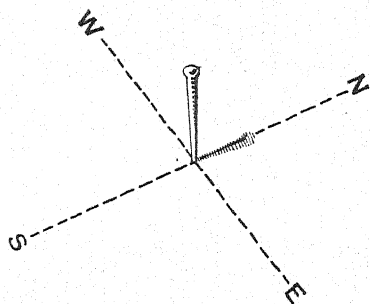
7. When the needle was steady he drew a line on the bench with a piece of chalk.

"I must tell you," he said, "that my compass does not point to the real north, but a little to the west of it. The line which I have just drawn is the *real* north and south line."

8. In the middle of the line he knocked a nail.

"Watch the shadow of the nail," he said, "and tell me when it touches the line."

I watched the shadow carefully, and saw it slowly creeping closer and closer towards the line.



9. At last the shadow lay right along the line towards the north.

“Now!” I cried.

“Look at your watch,” said father. I did so, and found that the hands pointed to twelve o’clock.

10. “There,” said father; “at this moment the shadow of the nail points right to the north. The sun which makes the shadow must, therefore, be right in the south.

11. “Don’t forget what I told you yesterday. In the northern half of the world the sun is always in the south at noon, or twelve o’clock in the day.”

22. A SHADOW-CLOCK.

1. We spent the afternoon and evening with Mr. Blake. As soon as we went into the garden I saw a flag flying at the top of the flag-post.

2. “Why is the flag flying to-day, Mr. Blake?” asked Kate.

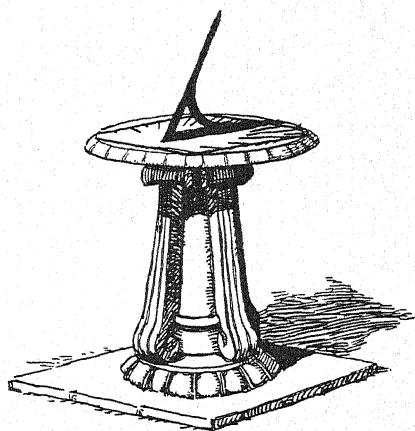
"Because it is Tom's birthday," he replied. Now wasn't that nice of him?

3. We looked at the mill, and saw the wheel going round and round. We watched the little soldier pumping up water for the fountain. Mr. Blake sent the engine and train round and round the garden, and we sailed boats on the pond.

4. At last it was time for tea. Mr. Blake's cook had made a fine plum cake, because it was my birthday. On the top of it I saw my name in sugar.

5. While we were taking tea I told Mr. Blake about the shadow trick that father had showed me that morning. "You must see my shadow-clock," he said.

6. I did not know that he had such a thing. Of course I was eager to see it. After tea we went on



to the lawn, and Mr. Blake pointed to a stone pillar. "That is my shadow-clock," said he.

7. On the top of the pillar there was a flat stone. On the stone I saw something like a clock-face with the hours marked on it. Standing up from the stone was a slanting rod of brass.

8. "How does this tell the time?" I asked.

"Look where the shadow falls," said Mr. Blake. "The edge of the shadow is now close to the figure V. This means that the time is now about five o'clock."

9. "I would sooner have my watch than your shadow-clock," I cried. "Fancy having to carry a stone pillar about with you!"

10. "Yes, your watch is better," said Mr. Blake. "This shadow-clock only tells the time in a rough sort of way. When the sun is not shining it is no good at all."

23. LONG SHADOWS AND SHORT SHADOWS.

1. I watched the shadow-clock for some time, then I said,—

“ I wonder how it works.”

2. Mr. Blake was quite ready to tell me. “ You see this brass rod. It points to the North or Pole Star.

3. “ When the sun shines, the rod throws a shadow. This shadow is the hour hand of my shadow-clock or sun-dial.

4. “ In the early morning the sun is in the east, so the shadow lies on the west side of the dial. All the morning the sun moves on towards the south. The shadow, therefore, moves along the dial from the west towards the north.

5. “ At twelve o'clock the sun is—”

“ In the south,” I cried.

“ Quite right,” said Mr. Blake. “ Then the shadow on the dial lies north—that is, on the figure XII.

6. "All the afternoon the sun moves on towards the west. The shadow, therefore, moves along the dial from the north to the east. That is how the shadow-clock works.

7. "Let us suppose that you spend a long day watching the sun-dial. At sunrise you notice that the rod throws a long shadow. The sun is then low in the sky, and when it is low the shadows are long.

8. "As the morning passes by, the sun rises higher and higher. The shadow on the dial becomes shorter and shorter. At twelve o'clock the sun reaches its highest point in the sky. Then the shadow is shortest of all.

9. "Through the afternoon the sun sinks little by little. This means that the shadow grows longer and longer. At sunset it is just as long as it was at sunrise."

10. I thought for a long time over what Mr. Blake had said. Suddenly I saw another way of finding out the points of the compass. I wonder whether you have found it out too.



Beyond Man's Footsteps.
(From the picture by Briton Riviere, R.A., in the National Gallery of British Art.)

24. FIRESIDE RAMBLES.

1. My birthday present from mother was a book called "Fireside Rambles in Many Lands." It is full of beautiful pictures of far-off places and people.

2. I turned over the pages and came to a picture which pleased me very much. You can see it on p. 75 of this book.

3. It shows a bare, lonely land covered with ice and snow. No trees, no fields, no houses, and no men are to be seen. On the top of a big rock stands a great white bear. He is roaring at the setting sun.



4. This picture shows a view in the far north of the world. There the weather is always cold. In winter the very sea is frozen over. There is ice on the land too, and very few plants can grow.

5. The sun never rises very high in the sky. The summer is short, and then the sun shines

by night as well as by day. It does not, however, give much heat.

6. The winter is very long and very cold indeed. There is darkness most of the time. The sun only shines for a few hours in the day. For weeks at a time it does not rise at all.

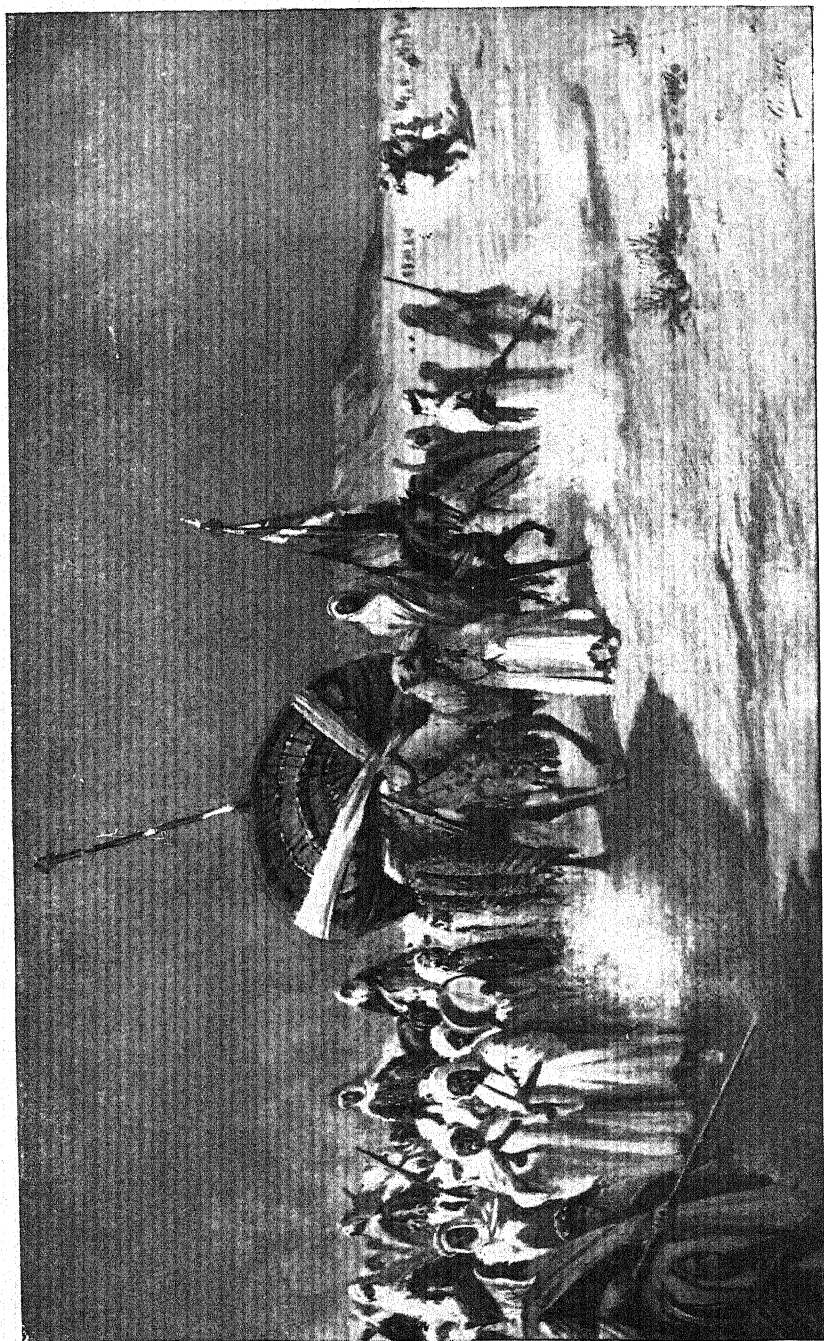
7. Very few people live in these very cold lands. Those who live there are called Eskimos. They are a small people, and they get their living by fishing and hunting.

8. They dress themselves in the furs of the animals which they kill. They sail the sea in skin-boats. On land they use sledges drawn by dogs.

9. Their houses are either tents of skin or huts made of wood which has drifted to their shores. Sometimes they live in houses made of snow.

10. The sea shores of these very cold lands abound in bears, seals, foxes, and other animals. The sea is full of fish, and millions of birds come from the south during the short summer.

11. There are no gardens or fields. Noth-



An Arab Chief's Wedding.
(From the picture by Girardet.)

ing good for food will grow. That is why there are so few people in the Far North.

12. Now and then ships sail to the Far North. The men in them go to hunt the whale. Sometimes they try to find the North Pole—that is the place which is farthest north on the earth.

13. A brave man named Peary has been to the North Pole. He is the first who has ever been there.

14. In the Far South land and sea are much the same as they are in the Far North. Before long we expect a party of Britons to reach the South Pole. By the South Pole I mean the place which is farthest south on the earth.

25. A SEA OF SAND.

1. One chapter in "Fireside Rambles" is about deserts. By a *desert* we mean a part of the world where little or nothing will grow. The very cold lands are deserts.

2. In my book there is a picture of another kind of desert. It shows the desert of Sahara in the north of Africa.

3. On the Sahara the sun shines all the year round with burning heat. Most of the land is covered with rocks and sand.

4. In the daytime the rocks are so hot that you can scarcely touch them. The sand is so hot that you can almost cook an egg in it.

5. Why is the country like this? My book says that years sometimes pass without a drop of rain. There is hardly ever a cloud in the sky. The land has become a wild waste of sand because there is so little water.

6. The frozen north and the frozen south are deserts because they have too little sunshine. In the hot parts of the world lands are deserts because they have too much sunshine and too little water. Trees, plants, and grass will not grow without water.

7. Few people live on the Sahara desert. There would be no people at all if there were not a few spots with water. Wherever water

is found there, trees, plants, and grass grow very well.

8. Look at the picture on p. 78. It shows you some of the men who live in the desert. They are called Arabs. One of the Arab chiefs is taking his bride home. You cannot see her, because she is in the tent on the back of the camel.

9. Some of the Arabs form a band. They are blowing fifes and beating drums. Look at the Arabs on horseback. What fine horses they ride!

10. You would think, at first sight, that the Arabs at the back of the picture are foes. Not so. They are friends, and they are doing tricks on horseback to show their joy.

11. They dash along at a wild gallop, yelling all the time. They fire their guns. Then they toss them high into the air and catch them again.

12. This is called the "powder play." It is so called because the Arabs shoot off a good deal of powder while doing it. There is always a "powder play" at a chief's wedding.



HARVESTERS RETURNING.

(From the picture by Lucy Kemp Welch. By permission of A. H. Harman, Esq.)

26. HARVEST HOME.

1. Yesterday was the last day of harvest. In the afternoon Kate and I went to Farmer Sharp's wheat field. Nearly all the other children of the village were there too.

2. We helped to load the last wagon. Then two boys and two girls climbed to the top of the load. The girls spread garlands and flowers over the wheat. One of the boys carried the last sheaf on a hay-fork.

3. When all was ready, off we went to the rick-yard. As we passed through the village we sang this song,—

4. “ Harvest home, harvest home !
We have ploughed, we have sowed,
We have reaped, we have mowed,
We have brought home every load
Hip, hip, hip, harvest home ! ”

5. When we reached the farm Mrs. Sharp gave us children plum cake and milk. Later in the day the farm servants were to have a supper in the barn.

6. When I went home I told father where

we had been and what we had seen. He said he was glad that Farmer Sharp still kept up the good old custom.

7. Then he told us the life-story of the wheat which had been carried that day. Months ago, the fields were ploughed and the seed was sown. Then came the cold winter.

8. The snow fell and covered the earth with a beautiful white blanket. This kept the seeds warm in the ground.

9. The winter passed away and the spring came. The trees burst into bud again, and the birds sang on every bough.

10. The sun's heat grew greater every day, and the rain fell in many a shower. A tiny green blade sprang out of the seed and pushed itself above the ground.

11. Then day by day the green corn was warmed by the golden sunshine and fed by the silver rain.



Every hour of the summer it grew taller and stronger.

12. Then came autumn. The corn changed from green to gold, and at last the ears were ripe. Then it was cut down and carried to the farmyard.

13. "So you see," said father, "that sunshine and rain are our two greatest blessings. Without sunshine and rain nothing would grow, and this world would be an empty desert. Our very lives depend upon sunshine and rain."

27. A SURPRISE.

1. Next morning at breakfast mother said, "You are lucky children. Mr. Blake is going to take you out to-day. He will be here at ten o'clock."

2. We were ready long before ten o'clock, so we went along the road to meet him.

"Where is he going to take us?" asked Kate. "I don't know," I replied, "but it is

sure to be a surprise. Mr. Blake loves to give you a surprise, doesn't he?"

3. Just then we saw Mr. Blake. "Good-morning, children," he said. "It is just the day for a walk. We are off to the hills."

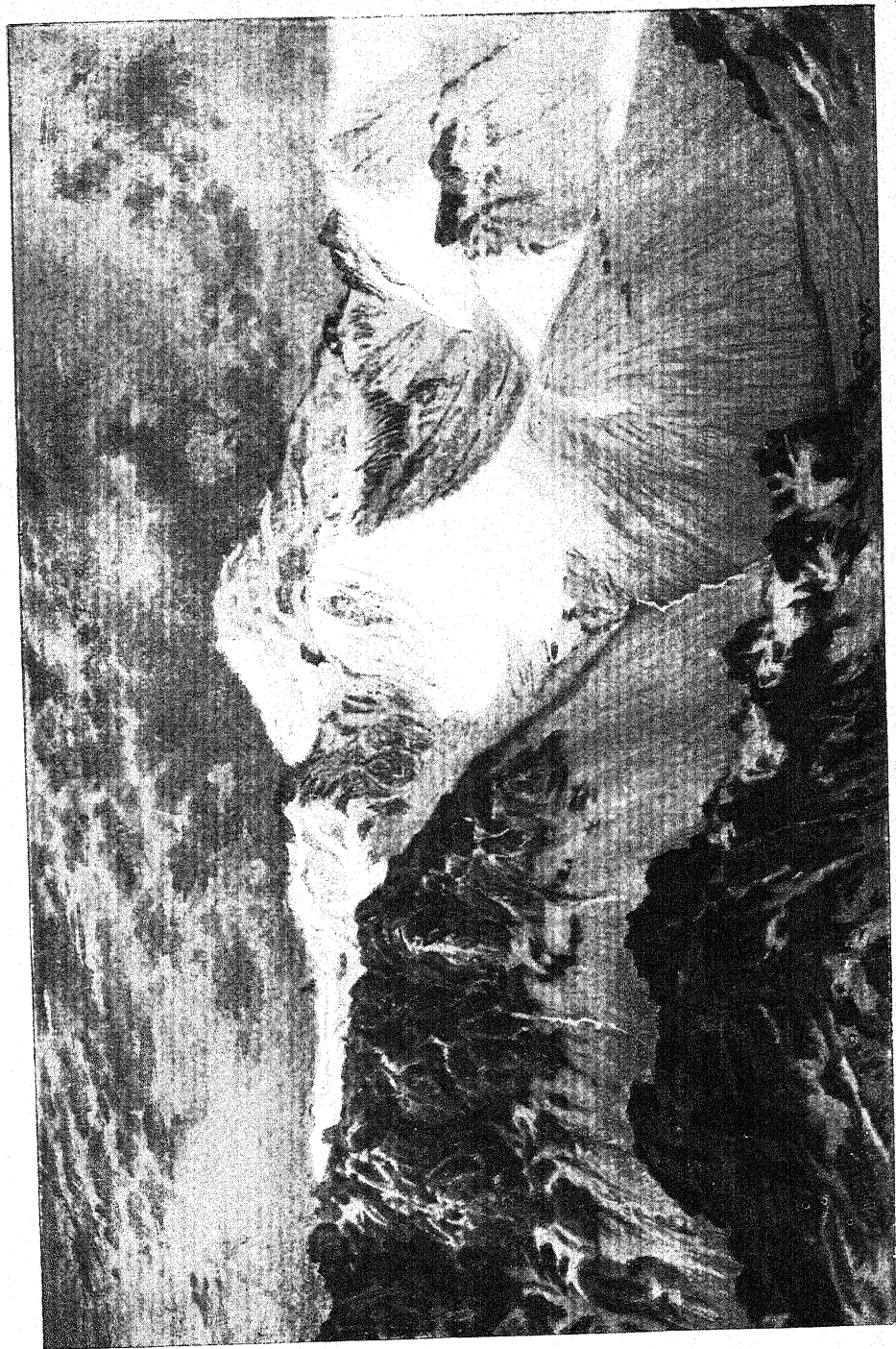


4. Kate and I were very pleased. We had never been to the hills, and we had often wished to go. I can see the hills from my bedroom window, but they are a long way off.

5. "It is too far for us to walk all the way there and back," said Mr. Blake. "Brent will drive us to the foot of the hills. Then we shall not be tired when we begin to climb."

6. Brent was waiting for us at the inn. We got into his trap, and away we went along the highroad at a fine rate. When we were well away from the village, Brent let Kate hold the reins. She was very proud.

7. Soon we saw the hills. They seemed to rise up like a great wall in front of us. A blue haze was hanging over them.

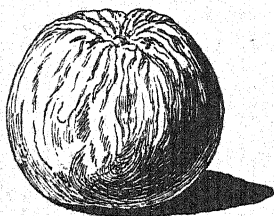


Lofty Snow-clad Mountains.

8. "Mr. Blake," I asked, "what makes the hills?"

Instead of telling me, he took an apple out of his pocket. "It is one of last year's apples," he said; "look at it."

9. I turned it over and saw that the skin was not smooth, but was covered with wrinkles. "What made it like this?" I asked.



and wrinkles."

10. "The inside has shrunk. Some of the water in the apple has dried up, and it has become smaller. In doing so it has pulled the skin into these folds

28. ON THE HILLS.

1. "Once upon a time," said Mr. Blake, "the earth on which we live was much hotter than it is now. As it cooled it grew smaller. Then its outer skin became crumpled up into folds and wrinkles like those of the apple.

2. "Some wrinkles stand up high on the face

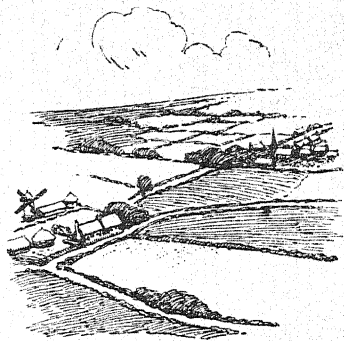
of Mother Earth. These we call *mountains*. Those which are not so high we call *hills*. The hollows between mountains or hills are called *valleys*.

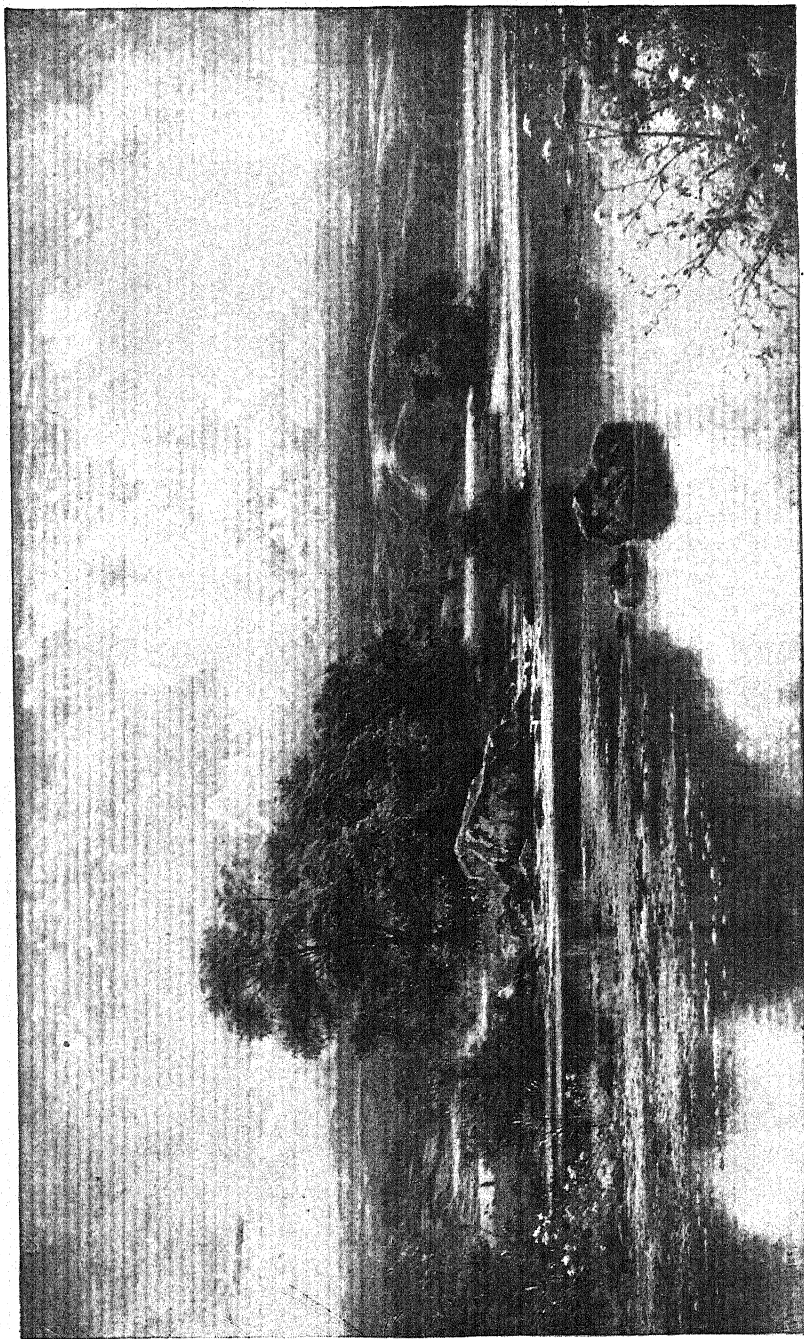
3. "Those parts of the earth which are fairly level are called *plains*. We are driving across a small plain now."

4. About twelve o'clock we reached the farmhouse of Grange. Behind the farm the hillside rose up steeply. "Here we are," said Mr. Blake, "at the *foot* of the hills. We are now going to climb to the top or *summit*."

5. We got down from the trap and began to climb. It was hard work, and before long we were out of breath. So we sat down on a big stone and looked back towards our village.

6. It was strange to look down on the fields and the roads and the houses. What queer shapes the fields are! Kate said the country below us looked like a patchwork quilt.





The River.

(From the picture by B. W. Leader, R.A. By permission of the Berlin Photographic Co.)

7. On we went again, up and up. The turf was very soft and springy beneath our feet. Scores of sheep were feeding on the hillside. I wish I could run up and down hills as well as a sheep.

8. At last we reached the top of the hill. Then we turned our backs on our village and looked towards the west. I know it was the west, because Mr. Blake lent me his compass.

9. Oh, what a grand view we had! The hill on which we stood seemed to send off long arms. Between us and these arms we could see the gleam of water. It lay in the valley like a great silver snake.

10. "I know it," cried Kate. "It is the giant *Running Water*!"

20. AT THE SOURCE.

1. At the top of the hill there were many bare rocks sticking up out of the ground. In some places, however, the ground was very wet and boggy. More than once I sank up to my ankles.

2. "It is very wet up here," I said to Mr. Blake.

"Of course it is," he replied. "Hills are rain-makers. You know that they turn the clouds into rain.

3. "Far more rain falls on the hills than on the plains. It is often raining up here when it is dry at Barton. Look at that river winding its way through the valley towards the sea. It gets much of its water from the rain that falls on these hills.

4. "Look there, and there, and there! You see many little streams dashing down the hillside to join that larger stream and feed it with water. These smaller streams running into a larger stream are called *feeders*.

5. "Talking about feeders," he went on, "I think it is time for lunch." We sat down, and Mr. Blake took off the knapsack which he was carrying. In it there were sandwiches, cakes, and apples.

6. We were hungry after our climb in the keen air of the hills, so we made a good meal.

Mr. Blake took a little tin cup from his pocket, and in this he brought us some water from a stream close by.

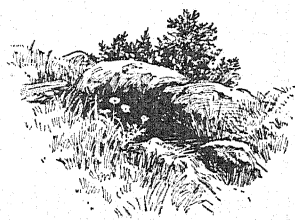
7. After lunch we rested awhile. Then Mr. Blake said, "Let us try to find the *source* of this river."

We walked down the hillside until we came to a little pool in the rocks.

8. A stream of water came out of the ground and fell into the pool. The overflow of the pool ran down the hillside, leaping over the rocks towards the valley. "Here it is," said Mr. Blake.

9. "Is this the source of that large river?" I cried. "I thought it would have been far bigger and grander."

10. "Great things," said Mr. Blake, "often begin in a very small way. A forest oak began as an acorn, and a giant was once a baby. Many very big rivers begin just as humbly as this."



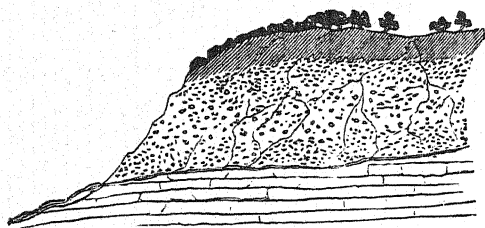
30. RAIN SAVINGS BANKS.

1. I sat down by the little pool and watched the water coming out of the ground.

“Mr. Blake,” I said, “I thought all the water on the earth came from the clouds. Here is water coming out of the ground. How can this be?”

2. Mr. Blake smiled. “This water comes from the clouds too,” he said. “It has been stored up in the ground ; that is all.

3. “When the rain falls, some of it runs away at once in streams. Most of it, however, sinks into the ground through the soft earth and the cracks in the rocks. Down it goes until it comes to a bed of clay or hard rock. This stops it from sinking any lower.



4. “You know that water will only run downhill. When it does so it becomes

stronger and stronger, until it is able to push away dirt or stones that block its path.

5. "Well, the water on the top of the clay or hard rock trickles slowly down the slope. It runs on and on underground until it comes to an end on a hillside. It pushes away the dirt or stones in its path, and gushes out as a *spring*."

6. "Very likely the water of this spring fell many miles away from here. It has slowly soaked its way through the ground to this place."

7. "Please, Mr. Blake," I said, "how can I be *sure* that this water has come from the clouds?"

"Notice a spring," he replied. "When there has been very little rain for a long time most of the springs 'run dry.'"

8. "This shows you that spring water is really rain water. The springs are just Rain Savings Banks; that is all."

9. "The well at the bottom of your garden is fed by a spring. There is a great deal of

water underground, and people sink wells in order to tap this water. In some lands the water is found more than half a mile deep.

10. "Some mountains are also Rain Savings Banks. The rain falls on them as snow. On very high mountains this snow never melts. It gets deeper and deeper, and the lower part of the snow-field turns into ice.

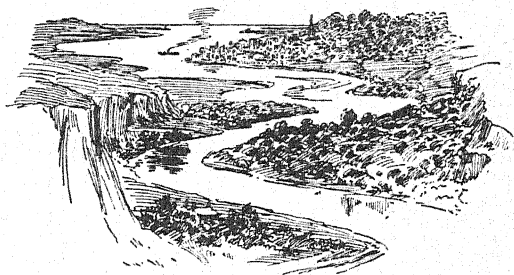
11. "These ice-fields or *glaciers* creep slowly down the mountain sides until they come into air that is warm enough to melt them. The water that runs away from the glacier forms a river. Many large rivers begin in melting ice-fields."

31. THROUGH THE FIELD-GLASS.

1. Mr. Blake had a field-glass with him, and he let us look through it. We could see the river for ever so far. It wound away in many a loop and bend towards a blue gleam in the distance. Mr. Blake told us that this was the sea.

2. "Why does the river wind about so much?" I asked.

"The water," he replied, "scoops out its channel or *bed*. It wanders from side to side picking out the easiest path for itself.



3. "When hard, rocky ground comes in the way, the water turns aside to find softer ground. Through this it eats its way.

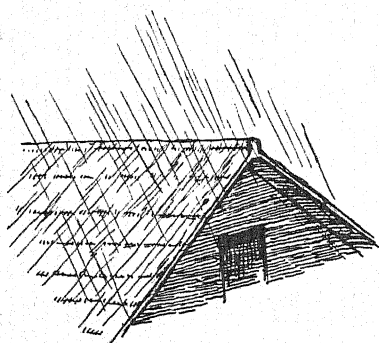
4. "Look around you," said Mr. Blake. "We are standing on a hill. Away to our right and to our left there are hills stretching towards the sea.

5. "We are looking down a long valley or *river basin*. All the water which falls in this valley finds its way sooner or later to yonder river."

6. We climbed to the top of the hill again, and Mr. Blake took us to a place where the ground was very soft and wet. He showed us

that some of the water in this place ran down the western side of the hill, and some down the eastern side of the hill.

7. "The ridge of this hill," he said, "is a divide or *water-parting*. It divides or parts the rain which falls on the hill, so that some of it runs down one slope and some down the other. A water-parting divides two river basins from each other.



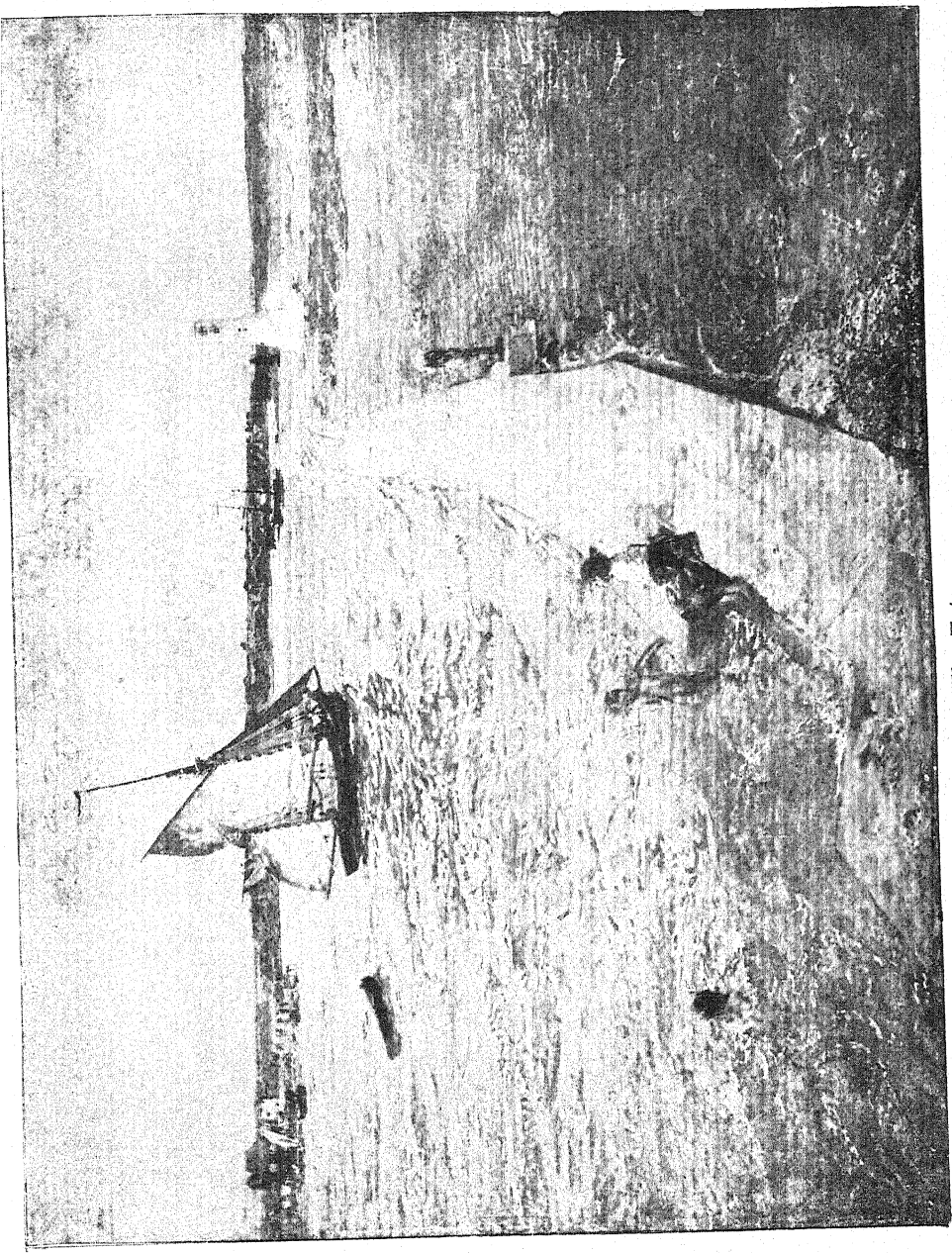
8. "Now," said Mr. Blake, "let us try to find the *source* of the stream that flows through my garden."

We had a long walk over the hill before we found it.

9. At last we came to a hollow, and in it there was a pool of water. It was not a very big pool.

"My stream," said Mr. Blake, "begins in this little lake.

10. "Many large rivers begin in lakes.



The Estuary.
(From the picture by Walter Bayes in the Walker Art Gallery, Liverpool.)

A lake is simply a hollow which is filled with water from the higher ground round about it. The overflow of a lake runs away in the form of a river."

32. WHAT USE IS A RIVER?

1. It was now time to go home. As we walked down the hill I said,—

"Mr. Blake, of what use is a river?"

2. "I think you can answer that question yourself," he replied.

"First of all, a river drains the land. If the water did not run off in rivers, the ground would be so wet that men could neither till it nor live on it.

3. "Rivers also give a good supply of fresh water to the people who live near them. Some large towns get their drinking water from rivers. Works which need much water are very often built on the banks of rivers.

4. "You have seen the running water in my garden turning the little mill. There are many

mills in this country driven by streams and rivers. In some places rivers turn the machines which give us electric light and electric power.

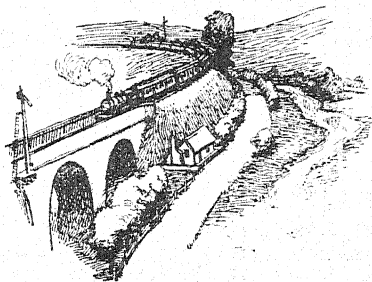
5. "Rivers are the ready-made roads of a country. Boats or ships sail on the rivers and carry people and goods from place to place. The only way to enter some countries is to sail up the rivers.

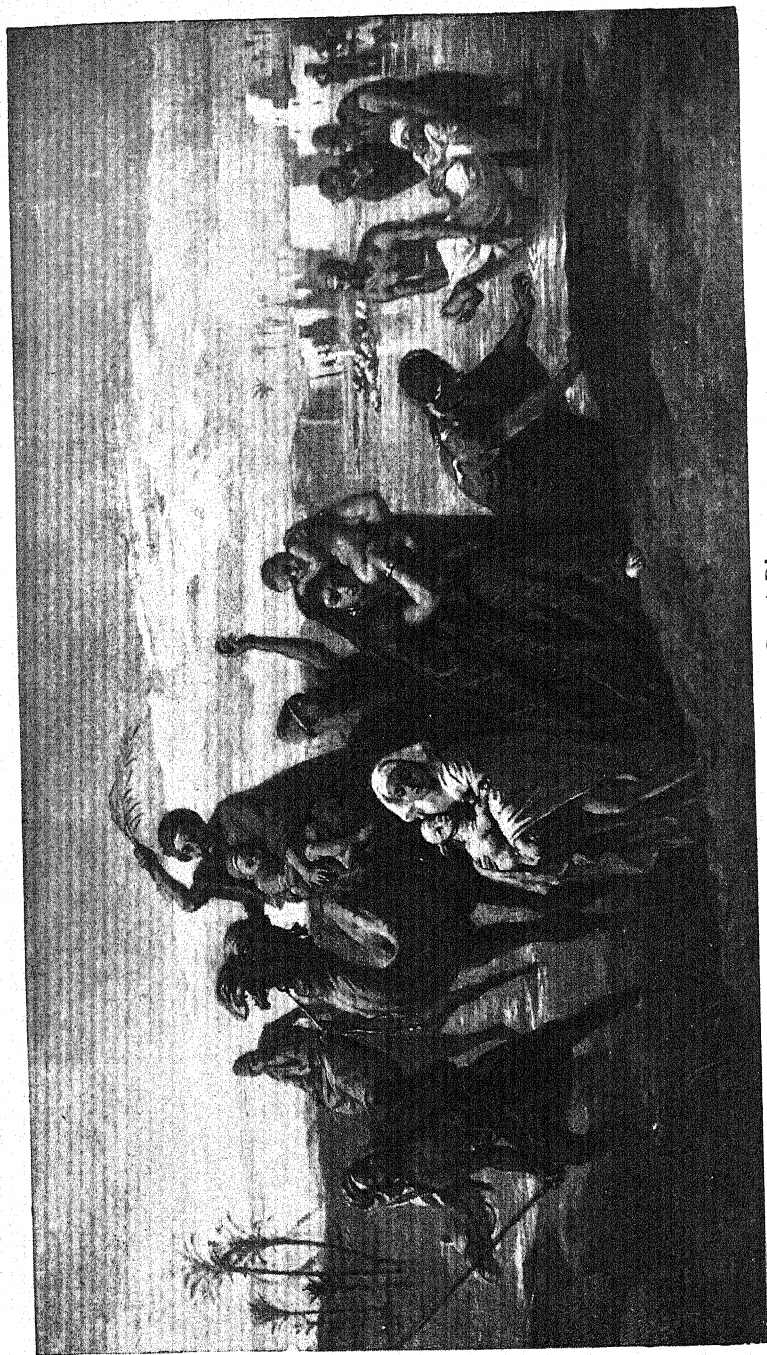
6. "In our country the rivers are not so useful as they were in former times. Railways now carry people and goods much quicker than they can be carried by water.

7. "If you travel by rail you will find that the roads and railways very often follow the rivers. You can easily understand the reason for this.

8. "The rivers pick out for themselves the easiest road from the high ground to the low ground. Men who build railways follow this easy road if they can.

9. "The part of a





The Rising of a Great River.
(From the picture by F. Goodall, R.A., in the Bristol Art Gallery.)

river which joins the sea is called its mouth. If the mouth is wide and open we call it an *estuary*. The most useful part of our British rivers is the estuary.

10. "On the estuaries of rivers we find the chief seaports of our land. Docks are built on the shores of estuaries, so that ships can easily load and unload their cargoes."

11. By the time Mr. Blake had told us all this we were at Grange again. Brent was waiting for us with the trap. We jumped up, and in about two hours we were safe home once more.

33. CLEARING OUT THE POND.

1. Next morning father said to us, "How should you like to go with me to the sea-side? I have a week's holiday."

2. Of course we were delighted. At once we began to ask all sorts of questions:—

"Are we going to-day? What time do we start? Where shall we stay? Shall we be

able to make sand-castles? Can Jim come with us? Are we—"

3. "Oh dear, dear," cried father, putting his hands over his ears, "you will deafen me. One question at a time. We shall start to-morrow morning. We shall stay at your Aunt Mary's house. You will be able to make sand-castles, and Jim can come with you."

4. Mother was busy packing, so she sent Kate and me out for a walk.

"Come along," I said; "we will go and say good-bye to Mr. Blake."

5. We found Mr. Blake in the garden. He was watching a man digging mud out of the pond.

"Where does all this dirt come from?" I asked.

6. "The stream brings it down," he said. "A stream is always wearing away its banks and its bed. All streams carry along with them mud and sand and bits of rocks. My little stream would fill up this pond in a few years."

7. "Some big rivers bring down so much mud that they almost choke up their mouths. Then the water has to run to the sea in narrow channels between great mud banks. Such rivers are said to form a *delta* at their mouths."

8. "But why do you find so much mud in the pond?" I asked.

"The water of the stream," replied Mr Blake, "is checked by the water in the pond. When the water of the stream meets the water of the pond it cannot run so fast.

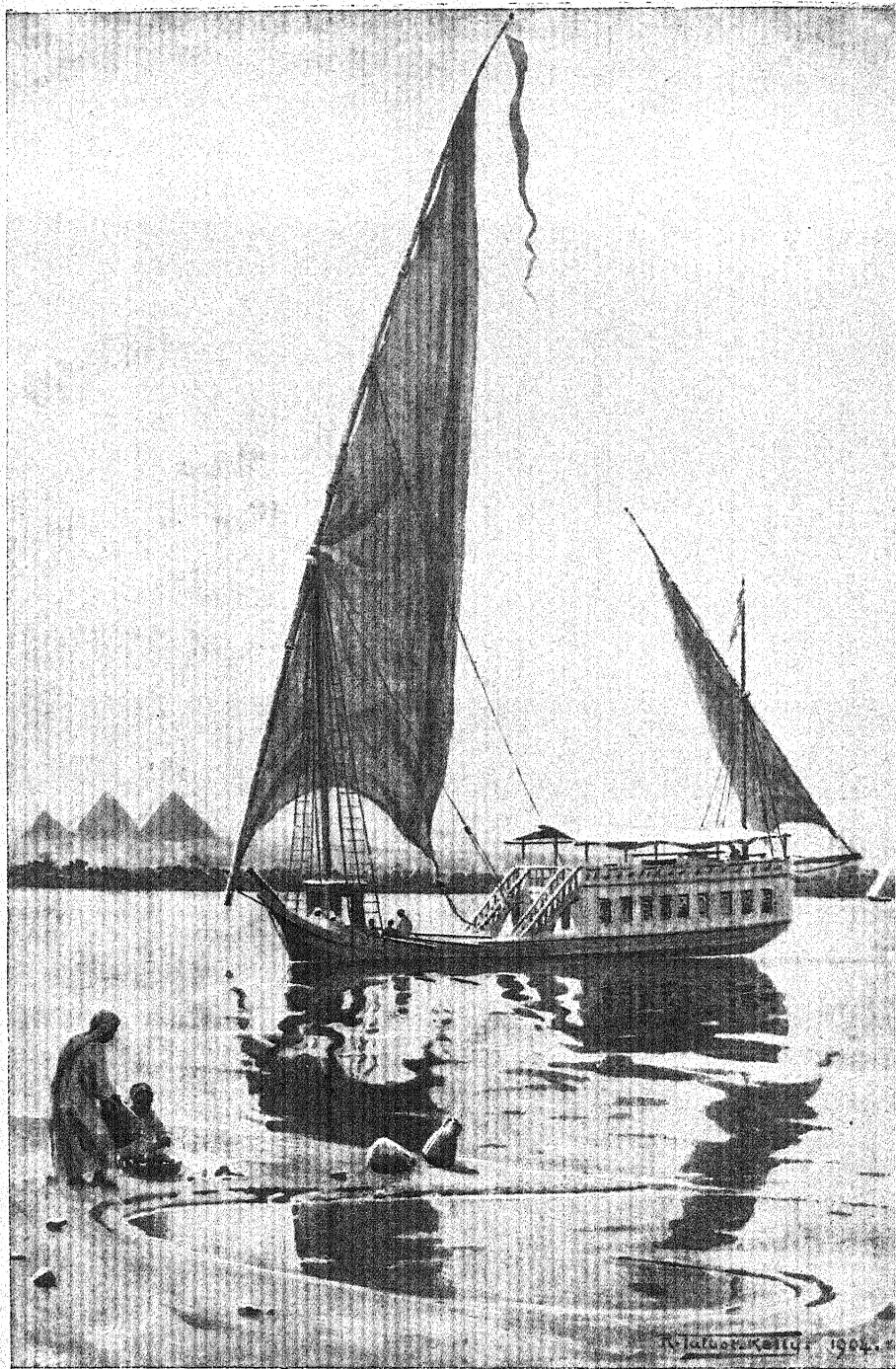
9. "If water runs fast it can carry a good deal of mud along with it. When it is forced to run slowly it drops much of the mud to the bottom."

10. "What are you going to do with the mud?" I asked.

"I am going to use it for the garden," was the reply. "It makes very good soil.

11. "I know a river which rises in a great flood once every year. It overtops its banks and spreads out all over the flat plains.

12. "Sometimes the river rises very quickly.



THE GREAT RIVER OF EGYPT.
(From the picture by Talbot Kelly.)

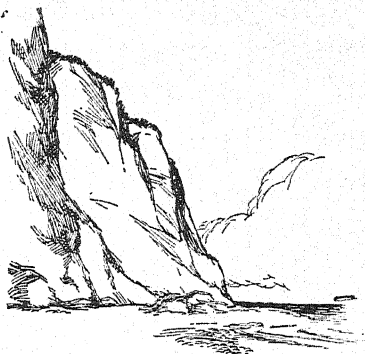
Look at the picture on p. 102. It shows the flood driving people out of a village. They are escaping to the higher ground.

13. "When the water drains off again, the land is found to be coated with rich mud. In this mud the people grow cotton and wheat and other crops. If the river did not bring down the mud the whole land would be a desert."

34. AT THE SEA-SIDE.

1. Here we are at Baytown. It is a splendid place for a holiday. We have just come home after a long morning on the sands.

2. How hard and yellow the sands are! They stretch along the edge of the sea. Between the sands and the town there are high rocks called *cliffs*.



3. The town is built on the cliffs. To get to the sands from the town you must walk down a steep, zigzag path.

4. If you walk along the sands towards the east you come to a big strong wall rising out of the water. It is built of great stones, and is so broad that a horse and cart can be driven along the top of it.

5. This wall shuts in the *harbour*. There are always ships in the harbour waiting to be loaded and unloaded.

6. There is a lighthouse at the end of the harbour wall. At night a light gleams out from its tower. This light guides ships to the harbour.

7. Out in the bay there is an *island*, that is *a piece of land with water all round it*. The only way to get to the island is to swim or to take a boat.

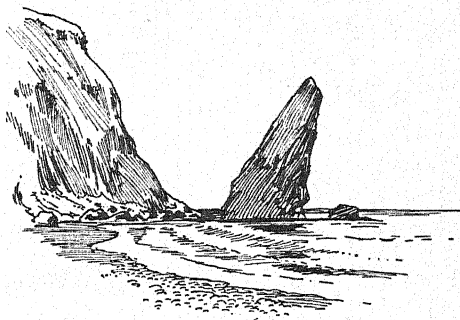
8. There is a lighthouse at one end of the island. Its bright light tells passing ships that the sea near to it is shallow and full of rocks. Ships must keep well away from the lighthouse or they will run ashore.

9. Beyond the harbour there is a great stretch of pebbles. The cliffs on that side are higher and steeper than they are on the other. They end in a high, steep rock that juts out into the sea like a fore-finger.

10. Father calls this steep, high rock *St. John's Head*. Aunt Mary calls it *The Point*, and I heard a man speak of it as a *cape*. I suppose all these names mean much the same thing.

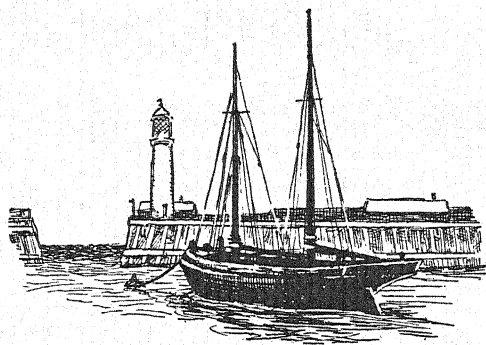
11. When we were on the cliff this morning I asked father why the place was called Baytown. He said that it was so called because the town stood on a *bay*—that is, a *bending in of the land next to the sea*.

12. If the sea runs a long way into the land it forms a *gulf*.



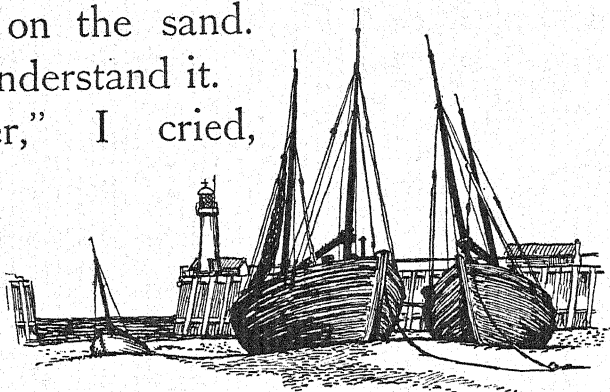
35. CAUGHT BY THE TIDE.

1. In the afternoon we went down to the shore again. At once I noticed that the sands seemed much bigger than they were in the morning. The sea was much farther off.

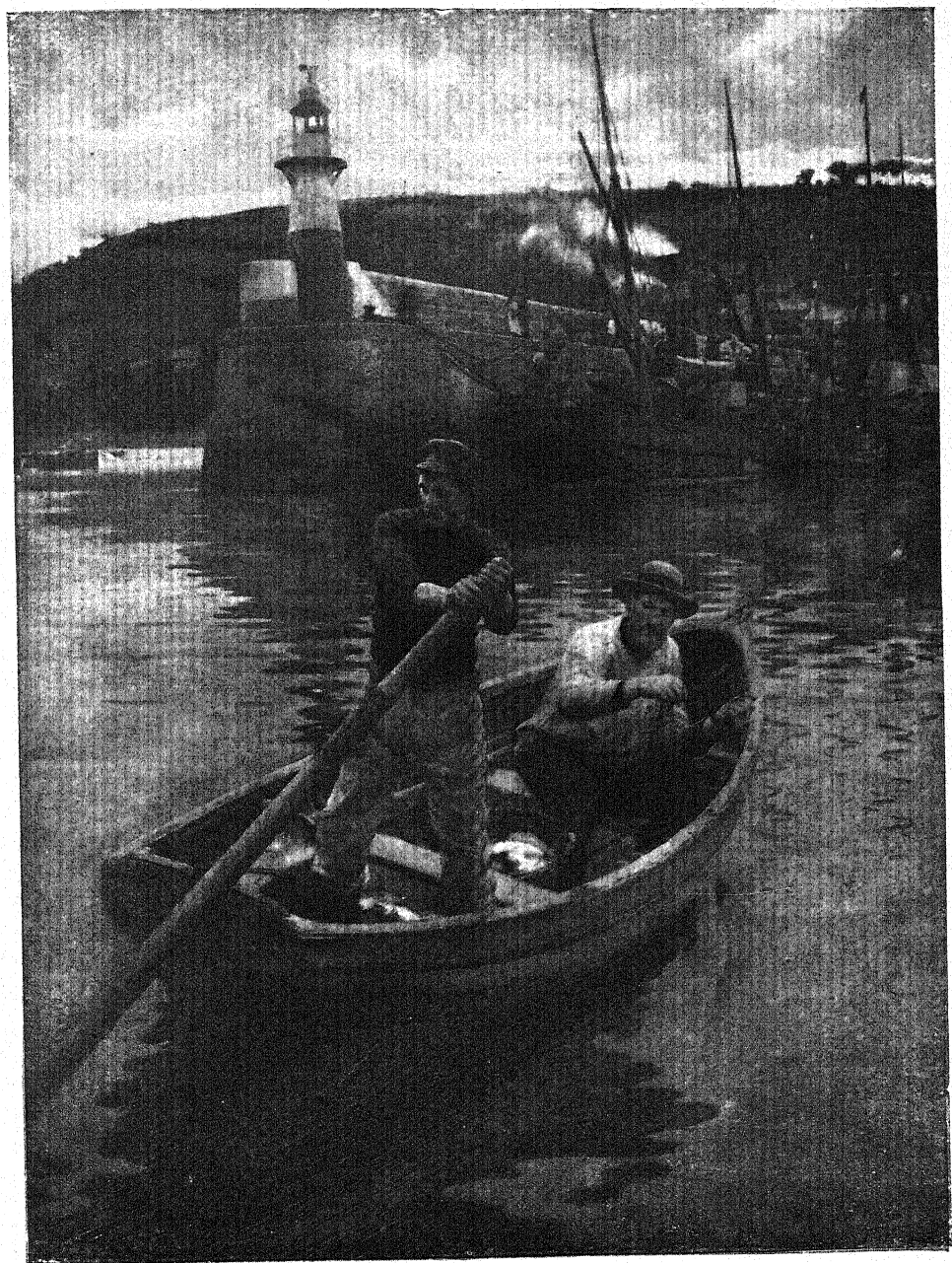


2. In the morning the harbour had been full of water. Now it was dry, and the ships were resting on the sand. I could not understand it.

3. "Father," I cried, "what is the matter with the sea? Is it running away because we've come?"



He laughed and said, "The tide is out; that is all."



The Lighthouse.

(From the painting by Stanhope Forbes, P.R.A., in the City of Manchester Art Gallery.)

4. Of course we wanted to know what he meant by that.

"Twice a day," said father, "the sea runs up the sands, and twice every day it runs back again. When it runs up we say that the tide is *flowing*. When it runs back again we say that the tide is *ebbing*."

5. "This morning the tide was at its height. It was then 'high water.' During the morning and while you were having dinner it was running back."

6. "Now it is 'low water.' Soon it will begin to run up again, and to-night it will be as high up as it was this morning."

7. Father told Aunt Mary what I said about the sea running away. She might have laughed, but she didn't. Aunt Mary is always kind.

8. She took down a book from the shelf, and opened it at a picture. "Look at this," she said. Kate and I bent over it. You can see it too. It is the first picture in this book.

9. "These fisher children," said Aunt Mary, "have been catching crabs. They have been so busy that they have not noticed the tide coming in.

10. "Now the tide is so high that they cannot get back along the shore. The water is rising higher and higher every moment.

11. "The boy helps his sisters to climb as high up the cliff as they can. Then he ties a rag to his crab-hook, and waves it to and fro. He hopes that some one will see it and come to save them.

12. "For a long time no sail is seen. The boy shouts and shouts again, but there is no reply. The little girl begins to cry, but her sister takes her hand and bids her be brave.

13. "All the time the waves are coming nearer and nearer. Now they are splashing over the boy's feet. If help does not come soon, he and his sisters will be drowned.

14. "Ah! what is that? A sail! A sail! The children have been missed, and their father is out seeking them. He has sailed to

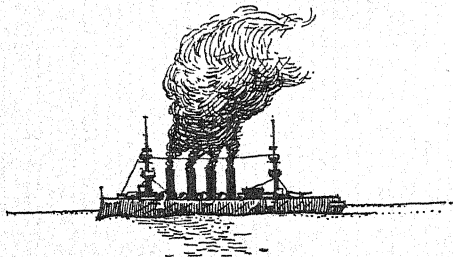
and fro for a long time, but not a sign of his children has he seen.

15. "At last he has caught sight of the little fluttering rag. Hurrah! his children are found. He steers towards them, and in a few moments they are safe and sound in his boat.

16. "I think the children will never forget the lesson which they have learned. They will take good care never again to be caught by the tide."

36. THE MAN OF WAR.

1. Next morning when I was coming down stairs I heard a roar like thunder. "What's that?" I cried.



"It's a warship in the bay," said father.

2. Almost everybody in the town was on the sands that morning. All were gazing at the warship. What a monster she was!

3. Father pointed out her funnels and masts. He also showed me her big guns. He said that they could knock down the town in less than half an hour. Fancy that!

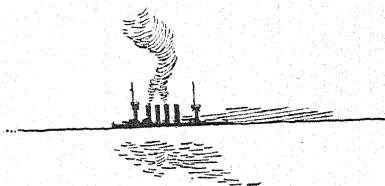
4. The warship lay in the bay until late in the afternoon. Then she fired one of her guns, as if to say good-bye, and sailed away. We stood on the cliff watching her.

5. "She will get to the end of the sea soon," cried Kate. She pointed to the line where the sky and the sea seem to meet.

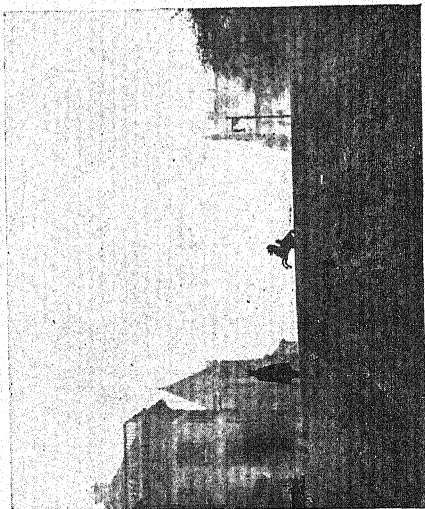
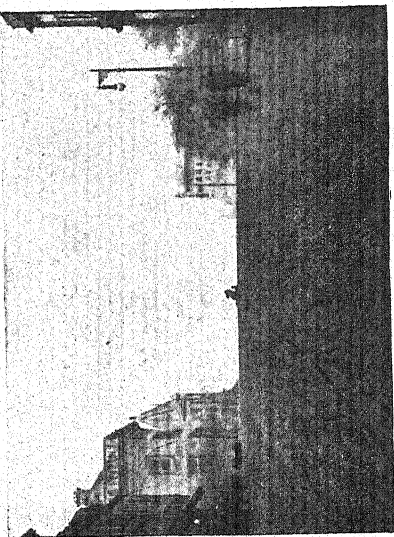
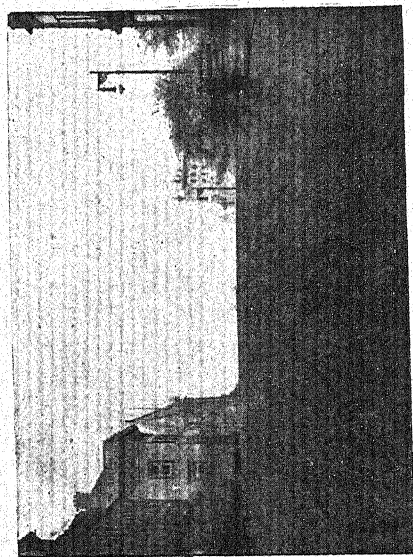
6. "That is not the end of the sea," said father. "The sea goes on and on past that line, but you cannot see it from here. We call that line the *horizon*."

7. Some time went by. Suddenly I cried, "Father, she's sinking!"

I can only see her funnels and masts. All the rest of her has sunk beneath the waves. Oh, the poor sailors!"



8. Father smiled. "She is quite safe," he



CLIMBING THE HILL.

1. At the foot. 2. Half-way up. 3. Three-quarters of the way up. 4. At the top.

said. "We cannot see her hull because there is a hill of water between us and her."

Of course I didn't understand that.

9. "You will soon," said father. "Watch me as I walk down this cliff path. Call out when you cannot see my legs. When you cannot see my body, call out again. When you cannot see me at all, call out the third time."

10. Father walked down the cliff, and I did as he told me. Soon I could not see his legs; then his body was hidden from view; and at last I could not see him at all.

11. Then father began to walk up the hill again. I saw his head first, then his body, and last of all his legs.

"What was it that hid me from you?" he asked.

"The hill was in the way," I replied.

12. "Now," said father, "the earth on which we live is not flat, but is round like a huge ball. It looks flat to us because we can only see a very little of it at a time.

13. "The land and the sea are not flat, but

rounded. It is this roundness of the sea that comes between us and the man-of-war."

14. "Where is the warship now?" cried Kate. We looked everywhere for her, but she had gone.

15. "The hill of water is in the way," said father. "It quite shuts out your view of the ship. You can see by yonder trail of smoke that she is still sailing on."

16. I watched the smoke for a long time. As I watched, I saw the masts of a sailing ship come into sight. After a time I saw her hull too. She had slowly climbed the hill of water that lay between her and me.

17. Father says that this proves the earth to be a huge ball. It is hard to understand, is it not?

37. GOOD-BYE.

1. Our short holiday was over. We were very sorry to leave Baytown. Kate cried, and I had to blow my nose very hard.

2. When we got back to Barton we went to see Mr. Blake. He shook hands with us, and said, "Well, how's the geography getting on?"

"Geography!" we cried. "What is that?"

3. Mr. Blake smiled the quiet smile that we know so well.

"You have been learning a little geography without knowing it," he said. "Geography is a hard word, but its meaning is easy. It means learning about 'the round world and they that dwell therein.'"

4. "You are going to school to-morrow, and you will soon begin to have real lessons in geography. I think you will find that what your father and I have taught you will be useful. You won't forget my garden, will you?"

5. "We shall never forget it," I said, "and we shall never forget your kindness. I hope you will let us come sometimes to see you on Saturdays."

6. "You will always be welcome," said Mr. Blake. "Before you go I want to give each

of you a little present. It will remind you of our talks and walks."

7. He took from his pocket two small packets, and gave one to Kate and the other to me. We opened our packets and found inside a little pocket compass. Oh, we *were* pleased!

8. We could not thank Mr. Blake enough. I said that I should wear my compass on my watch chain. Kate said that she should wear hers on a ribbon round her neck.



9. "Good-bye," said Mr. Blake. "Learn a lesson from your little compass. Try to be as faithful to your word and to your work as the needle is to the Pole. Then I shall always be proud of you. Good-bye!"

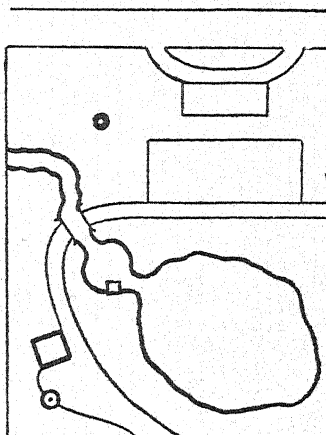
EXERCISES.

(To be worked under the direction of the teacher.)

Lesson 1.

1. With your pencil and ruler copy this drawing. It is what is called a *plan* of Mr. Blake's house and garden and the road in front. *A plan is an outline drawing showing the shape and size of the ground on which some thing, building, or place stands.*

2. Point out on the plan the main road, the house, the lawn, the path, the flagstaff, the stream, the little mill, the lake, the summer-house, and the fountain. Put a cross on the main road at the place where you think the motor ran over the dog.



Lesson 2.

1. Make a model in plasticine or clay showing the high bank, the stream, and the pond in Mr. Blake's garden.

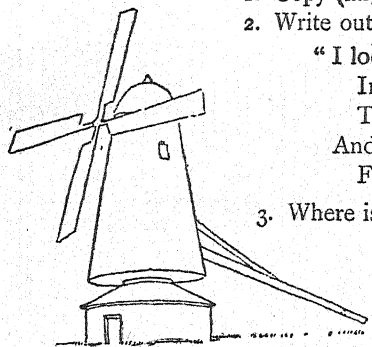
2. In which direction does water always run? How can you make running water run more quickly?

3. Do the wooden soldier's arms always go round the same way? If not, why not?

Lessons 3 and 4.

Study the coloured picture on page 14, and answer the following questions:—

Is this a slow-flowing or a fast-flowing river? How can you tell? What flower has its leaves floating on the water? Can you tell the name of any of the wild flowers growing on the banks? Can you tell the name of any of the trees shown in the picture? How have the girl and the child crossed the river? What kind of a boat is it? How is it moved along? Where is it kept when it is not in use? If the boat were allowed to drift, which way would it go, and why?

Lesson 5.

1. Copy (larger) this little drawing of a windmill.
2. Write out the following verse :—

“ I look down over the farms ;
 In the fields of grain I see
 The harvest that is to be,
 And I fling to the air my arms,
 For I know it is all for me.”

3. Where is a windmill usually set up—in a valley or on a hill? Why?
4. Look at the windmill in the drawing. The upper part of it will turn round. Why?
5. When is a windmill of no use? When is a water-mill of no use?

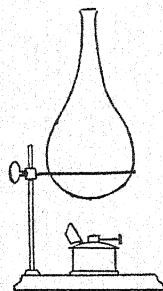
Lesson 6.

1. How can you make steam? When the kettle is boiling on the hob, what is it that rattles the lid? What work have you seen Giant Steam doing?
2. Study the coloured picture on page 23, and answer the following questions :—

What is driving this ship through the wind and the waves? Which way is the wind blowing? Could a sailing-ship go the same way as this warship? If not, why not? What makes the sea rough?

Lesson 7.

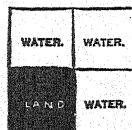
1. Copy this little drawing.
2. Why cannot you see the steam inside the flask? Why can you see it outside?
3. If you breathe out on a cold day, what do you see? What causes this cloud? Why cannot you see it on a hot day?
4. How can you turn steam into water again?

**Lesson 8.**

1. If you leave a cup full of water on the window-sill for a day or two, you will find that some of the water has gone. How has it gone, and where has it gone?
2. When you are sitting in a warm room in very cold weather you see little streams of water running down the inside of the window-panes. Where does the water come from?

Lesson 9.

1. Copy this little drawing. What does it teach you?
2. Write down all that you know about the sun.
3. Suppose there were no sun, what would happen?



Lesson 10.

Study the coloured picture 'on page 33, and answer the following questions:—

Which way is the river flowing? Is it fast-flowing or slow-flowing? Can a boat sail along the part of the river which you can see? Why not? In which direction is it easier to row a boat on this river? Where do you think would be a good place to catch fish in this river? Is it a windy day or a still day? What do the black clouds mean? In what part of the picture is the rain now falling? In what part of the picture is there fine weather?

Lesson 11.

1. How do you know that there is air all round you?
2. What damage have you seen done by a storm of wind?
3. In what months of the year do we have most storms?
4. Where would you rather be during a storm—on land or at sea? Say why.

Lesson 12.

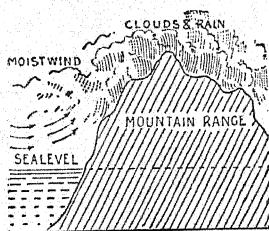
1. You can make wind by means of a pair of bellows. Try to find out how the bellows work.

2. Suppose you are shut up in a room and are allowed to look out of the window. How can you tell which way the wind is blowing?

Lesson 13.

1. Copy this little drawing.
2. Write out the following:—

“Evening red and morning gray
Set the traveller on his way;
Evening gray and morning red
Bring down rain upon his head.”



Lesson 14.

1. Make a rough copy of the weather-cock on page 47.
2. Write out the following:—
“When sea-birds fly far out to sea it is a sign of fair weather. If they do not go far from shore, or if they fly inland, we may be sure that cold or stormy

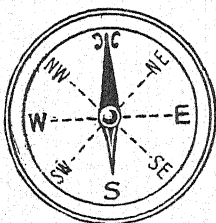
weather is coming. When sheep, cows, or horses seek shelter near hedges or walls, rough weather is at hand. If you can hear sounds at a great distance, you may expect rain to fall. If much dew falls at night, the next day will very likely be fine. If the air is very clear and the distant hills seem to be nearer than usual, wet and stormy weather will follow."

Lesson 15.

1. On which side of the school is the sun at nine o'clock, at twelve o'clock, and at four o'clock?
2. Draw an oblong to show the shape of your schoolroom, and put inside it a cross (\dagger) showing north, south, east, and west.
3. Make a drawing of a chimney and smoke on a fine, calm day.

Lesson 16.

1. Copy this little drawing of a compass.



2. In which direction do you go home from school?
3. Borrow a magnet from your teacher and make a magnet for yourself out of a pen-nib. How can you prove that the pen-nib is now a magnet?
4. How can you find out north and south, east and west, by means of this pen-nib?

Lessons 17 and 18.

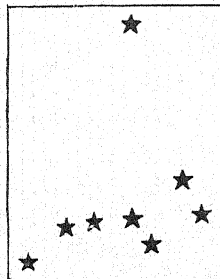
1. Write all you can about the coloured picture on page 56.
2. Midway between north and east is *north-east*; midway between north and west is *north-west*; midway between south and east is *south-east*; midway between south and west is *south-west*. Draw a cross showing north, south, east, and west, and then put in north-east, north-west, south-east, and south-west.

Lesson 19.

1. Copy this little drawing. It shows you the stars forming the "Plough," and the North or Pole Star.

2. Write out the following:—

"When Peary reached the North Pole he found that the Pole Star was right over his head. As he went south towards his own country the Pole Star seemed to sink lower and lower in the sky. If he had kept on travelling south, he would have lost sight of the Pole Star altogether. Then he would have seen a cluster of stars in the south part of the sky. This cluster is known as the



Southern Cross. The Southern Cross is not quite over the South Pole, but not far from it."

3. Write all you can about the "lights" which you see in the picture on page 62.

Lesson 20.

1. Write all you can about the picture on page 66.

2. Suppose you are facing the sun at sunset. In which direction is your face? In which direction is your back? In which direction is your right hand? In which direction is your left hand?

3. Suppose you are facing the sun at sunrise. In which direction is your face? In which direction is your back? In which direction is your right hand? In which direction is your left hand?

Lesson 21.

1. Suppose you are facing the sun at noon. In which direction is your face? In which direction is your back? In which direction is your right hand? In which direction is your left hand?

2. Study the coloured picture on page 66. At which part of the sky are you looking? Where is the sun? Where will it rise to-morrow?

3. Draw a square or an oblong to stand for the plan of your house. On which side does the sun shine at sunrise, at noon, and at sunset?

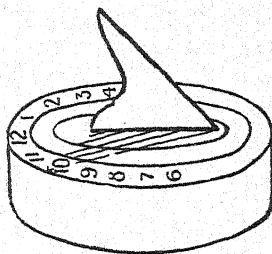
Lesson 22.

1. Copy this little drawing of a sun-dial.

2. Write out the following:—

"One dark night a boy living on a farm was sent to find out the time. What do you think he did? He lighted a lantern and went to the sun-dial in order to discover what o'clock it was." Why was this a foolish thing to do?

3. Sometimes you see a sun-dial on the wall of a house. On which wall?



Lesson 23.

1. Draw three rough pictures showing the same tree at sunrise, noon, and sunset.

2. Ask teacher to let you set up a stick in the playground on the first sunny day. Measure the length of the shadow at nine o'clock, at twelve o'clock, and at four o'clock. When is the shadow shortest?

3. In Lesson 23, paragraph 10, you read: "Suddenly I saw another way of finding out the points of the compass." What is this way?

Lesson 24.

1. Write all you can about the picture on page 75.
2. Why are there no gardens or fields round about the North or the South Pole?

3. Write out the following:—

"Some Eskimos make their winter houses of blocks of snow, with sheets of ice for the windows. Perhaps you shiver at the thought of living in a snow house, but you need not do so. A snow house is a snug home, because snow keeps in the heat just as a blanket does. It is the blanket of snow spread over the ground in winter which keeps the roots of plants from being killed by the cold."

Lesson 25.

1. Why is there so much sand in the desert of the Sahara?
2. What animal is called the "Ship of the Desert"? Why is it so called? What do you know about it?

3. Write out the following:—

"The chief tree of the desert is the date-palm. It is a beautiful, tall tree, with a great crown of leaves at the top. The date-palm gives the Arab food, drink, timber, and shade. He eats the dates which grow on it, and sometimes they are his only food for weeks at a time."

Lesson 26.

1. Write out all you can about the picture on page 82. (Don't forget to explain why the shadows are long.)
2. What is done to the wheat after it is carried to the rick-yard? How is it made into flour?

Lessons 27 and 28.

1. In plasticine or clay make a model of a *hill* rising up from a *plain*.
2. Why is it harder work to climb a hill than to walk on level ground?
3. What kind of country would you prefer to live in—amongst the mountains, or on the plains? Say why.

Lesson 29.

1. Model a valley between hills, and show streams running down the hillsides and forming a river flowing through the valley.
2. Write out and learn the following: "The head-waters of a river are known as its *source*. A river may rise in a spring, a lake, or a glacier."
3. Study the coloured picture on page 87, and write all you can about it.

Lesson 30.

1. Make a hill, the lower part of plasticine or clay and the upper part of sand. Pour water very gently on the sand, and notice where it comes out.
2. Copy the little drawing on page 94 showing how a spring is formed.

Lesson 31.

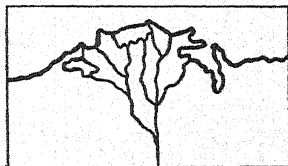
1. Model the *river basin* which you read about in Lesson 31.
2. Model a lake with a river running into it and another running out of it.
3. Why do some rivers wind about so much?

Lesson 32.

1. Name four ways in which rivers are useful.
2. Is there a river near your town or village? What is its name? If you have seen it, write all you can about it.
3. Where does the water which you drink come from? How is it brought to your house?

Lesson 33.

1. Copy this little map of a delta.
2. Write all you can about the coloured picture on page 102.
3. Get a glassful of water out of the nearest stream and let it stand for some time. Notice how much mud sinks to the bottom.

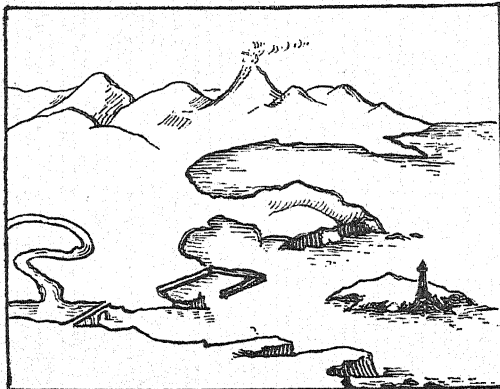


Lesson 34.

1. Make a model from the picture given below. Point out the *cliffs*, the *capes*, the *bays*, the *island*, and the *strait*.
2. Model the harbour about which you read in this lesson.

Lesson 35.

1. Study the coloured picture on page 99.



Which way is the tide running? Which is the easier way for the boy to swim? Which way ought he to start swimming? Why are there walls along the bank of the river? Does the water ever overtop these walls? How do you know? What is the use of the lighthouse which you see in the picture? Suppose the wind blows the ship five miles in an hour, and suppose the tide carries it up the river three miles in an hour. How far will the ship go in one hour

when the tide helps it? How far will the ship go in one hour when the tide is against it?

2. Say in your own words what the following verses mean :—

“ ‘O Mary, go and call the cattle home,
And call the cattle home,
And call the cattle home,
Across the sands o’ Dee!’
The western wind was wild and dank with foam,
And all alone went she.

“ The creeping tide came up along the sand,
And o’er and o’er the sand,
And round and round the sand,
As far as eye could see ;
The blinding mist came down and hid the land,
And never home came she.”

Lesson 36.

1. Study the coloured picture on page 111, and answer the following questions :—

What time of day is it? Is the tide in or out? How do you know? What will the harbour be like when the tide is out? Look at the boat in the foreground. What is the man standing up doing? What is the other man doing? What is there at the end of his line? What kind of fish do you think he is catching? Look at the steamer by the wall of the harbour. What do you think she is unloading? What is the work of most of the men living in this place?

2. When a sailor wishes to get a wider view of the sea he climbs the mast. Why does he do so?

THE END.